REPORT

Semi-Annual Ground Water Monitoring
Second Half 2009
Bridgewater, New Jersey Site

Wyeth Holdings Corporation
Madison, New Jersey

January 2010

January 29, 2010

Mr. Haiyesh Shah
Case Manager
New Jersey Department of Environmental Protection
Bureau of Responsible Party Site Remediation
401 East State Street, 5th Floor West
CN 028
Trenton, New Jersey 08625-0028

Re: Semi-Annual Ground Water Monitoring –Second Half 2009
Former American Cyanamid Site
Bridgewater Township, New Jersey

File: 5772/45539 Task 2 Corr

Dear Mr. Shah:

On behalf of Wyeth Holdings Corporation (Wyeth), enclosed is the Second Half 2009 Semi-Annual Ground Water Monitoring Report (GWMR) associated with the Wyeth (Former American Cyanamid) site, located in Bridgewater Township, New Jersey. Ground water monitoring is performed in accordance with the 1988 Administrative Consent Order (ACO) between the American Cyanamid Company (Cyanamid) and the New Jersey Department of Environmental Protection (NJDEP), as amended in 1994.

Monitoring of the groundwater over the past 20-plus years has demonstrated consistency in groundwater concentrations and indicated that the groundwater conditions at the site are in a state of semi- equilibrium. Recognizing this, in your letter, dated October 22 2008, the NJDEP requested that Wyeth continue monitoring on a quarterly basis but only submit reports on a semi-annual basis. In a letter to NJDEP dated December 16, 2008, Wyeth proposed that both the groundwater monitoring and reporting be performed semi-annually, until the ongoing Comprehensive Site-wide Feasibility Study (FS) is approved and implemented. An email from the NJDEP to Wyeth on December 30, 2008 accepted this proposal with the provision that once the FS is approved, all groundwater requirements (e.g., wells, analytes, frequency, etc.) will be re-evaluated. This submittal represents the second of these semi-annual reports.

1090 King Georges Post Road, Suite 904, Edison NJ 08837
(732) 225-7380 / FAX (732) 225-7931 ■ http://www.obg.com

During the creation of this report Table 3-2 was modified to correct minor historical calculation errors. The 4Q08 Total Production Well Volume was rounded to be consistent with other values and the calculation of the 1H09 Total Production Well Volume was corrected.

Should you have any questions or comments on the documents provided herewith, please feel free to contact me at 732-225-7380 extension 220.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Angelo J. Caracciolo, III
Sr. Project Manager
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cc: Mr. Marc Romannel, NJDEP
Ms. Monica Baussan, USEPA, 20th Floor
Mr. Clifford Ng, USEPA
Mr. Russ Downey, Pfizer
Mr. Thomas Donohue, Pfizer
Mr. John Egan, Pfizer
Mr. Gary DiPippo, HydroQual, Inc.
Ms. Maureen Hoke, O'Brien & Gere

5772/45539.200.100

REPORT

Semi-Annual
Ground Water Monitoring
Second Half 2009
Bridgewater, New Jersey Site

Wyeth Holdings Corporation
Madison, New Jersey

Steven J. Roland

Steven J. Roland, P.E.
Program Director

January 2010

O'BRIEN & GERE

WYETH HOLDINGS CORPORATION
5 GIRALDA FARMS
MADISON, NJ 07940

Wyeth

SIGNATURE AUTHORIZATION

SITE REMEDIATION ACTIVITIES

I, Geraldine A. Smith, Vice President Wyeth Holdings Corporation, authorize the position of Senior Director or Director EHS Wyeth, to sign as the authorized representative, all reports and certifications required by N.J.A.C. 7:14B, N.J.A.C. 7:26B, N.J.A.C. 7:26C, N.J.A.C. 7:26E, and N.J.A.C. 7:27 for Wyeth Holding Corporation's East Main Street Bridgewater, New Jersey facility.

Geraldine A. Smith

Geraldine A. Smith
Vice President

Date 8/8/08

WYETH HOLDINGS CORPORATION, BOUND BROOK, NJ

SEMI-ANNUAL GROUND WATER MONITORING REPORT

SECOND HALF 2009

CERTIFICATION

I certify under penalty of the law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement, which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Thomas Donohue

T. Donohue
Director, EHS
Wyeth

Notary: Dana M Bailey 1/22/10

DANA M. BAILEY
NOTARY PUBLIC OF NEW JERSEY
ID #2356799
MY COMMISSION EXPIRES MAR. 5, 2012

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1. Introduction

This report presents the results of the second half 2009 semi-annual ground water monitoring program at the Wyeth Holdings Corporation Site (formerly the American Cyanamid Company Site) in Bridgewater, New Jersey. The monitoring program includes site-wide ground water pumping and monitoring, as well as the ground water monitoring requirements for the Impound 8 Resource Conservation and Recovery Act (RCRA) Facility. This report was prepared in accordance with the Administrative Consent Order (ACO) between the American Cyanamid Company (Cyanamid) and the New Jersey Department of Environmental Protection (NJDEP), as amended in May 1994 (ACO Amendment). American Home Products Corporation (AHP), now known as Wyeth, having acquired Cyanamid in November 1994, is responsible for overseeing the monitoring program.

1.1. Background

In 1982, Cyanamid began monitoring the site-wide ground water control system at the facility. The monitoring program was conducted in accordance with the requirements of the 1982 ACO between Cyanamid and the NJDEP.

The NJDEP issued a final New Jersey Pollutant Discharge Elimination System-Discharge to Ground Water (NJPDES-DGW) Permit # 0002313 for the site on September 30, 1987. The monitoring requirements were increased for this permit by adding analyses and monitoring wells to the site-wide program. In 1988, the NJDEP modified the NJPDES-DGW # 0002313 to include the Impound 8 Facility monitoring requirements.

The Impound 8 Facility program consists of the construction of a permitted RCRA waste management facility for the closure of several on-site lagoons and impoundments. As part of the program, the contents of remaining on-site impoundments may be treated and consolidated in the Impound 8 Facility. This facility includes the areas of former Lagoons 8 and 9. Lagoon 9A has been closed and is incorporated into the ground water monitoring program at Impound 8. The monitoring program details were presented in the Impound 8 Facility Design Report (BB&L, March 1988), the Impound 8 Facility Ground Water Detection Monitoring Program (GWDMP) Work Plan (BB&L, December 1986, Revised December 1987 and March 1988), and the Implementation Plan (BB&L, March 1988) as part of the RCRA Permit.

In May 1994, an amendment to the ACO (ACO Amendment) between Cyanamid and the NJDEP was executed. The ACO Amendment incorporates and supersedes the site-wide and Impound 8 ground water pumping and monitoring requirements referred to previously.

In September 1997, AHP requested modifications to the site-wide ground water monitoring requirements. The modifications were approved by the NJDEP in correspondence dated September 30, 1997. The following table and bullets summarize the currently approved monitoring program:

In July of 1996, a Record of Decision (ROD) was issued by the NJDEP for the Group II Impoundments. Group II includes Impoundments 15, 16, 17, and 18. This ROD included requirements for development and implementation of an overburden ground water monitoring program. The program was developed and agreed upon as outlined in correspondence to the NJDEP dated March 18, 1997.

On October 22, 2008, in a letter correspondence from NJDEP, reporting requirements were reduced from quarterly to semi-annually. In December 2008, Wyeth requested further modifications to the site-wide ground water monitoring requirements. The requested modification, reduce sampling to semi-annual sampling, was approved by the NJDEP by e-mail correspondence dated December 30, 2008. Sampling events are now scheduled for April and October each year. The monitoring requirements are summarized in Table 1-1.

Table 1-1 ***Site-wide semi-annual monitoring requirements summary.***

Monitor Wells/Points	Requirements
Production wells (PW-2 and PW-3)	Target Compound List (TCL) Volatile Organic Compounds (VOCs) TCL Semi-volatile Organic Compounds (SVOCs), Arsenic Extract at least 650,000 gallons of ground water per day
Perimeter bedrock wells (SS, TT, WW, XX, YY, ZZ)	TCL VOCs Arsenic (wells SS, TT and YY only)
Impoundment 3, 4 and 5 area overburden wells (28R and MW-2)	TCL VOCs TCL SVOCs Arsenic, cadmium Chlorides (MW-2 only)
Impoundment 14 area overburden wells (19R, 21R and O-R)	TCL VOCs TCL SVOCs (19R only)
Impoundment 17 and 18 (AAA, CCC-R, EEE-R, III, KKK) Note: Wells AAA, CCC-R, EEE-R requirements met under Group II monitoring	TCL VOCs TCL SVOCs Metals Chlorides Radiologicals (CCC-R, EEE- R, and KKK only)
Group II overburden wells (AAA, CCC-R, EEE-R, 16MW-2) Note: 16MW-2 analyzed for metals only	TCL VOCs TCL SVOCs Metals Cyanide and phenols
Lagoon 6 and 7 and Impoundment 19 and 24 area overburden wells (32-R, 34-R, 38-R, 42-R and TFP-94-1R) Note: 32-R analyzed for VOCs only.	VOCs TCL SVOCs Arsenic Cadmium, chromium, chlorides (38R only)
Impoundment 8 wells (RCRA D-1 through RCRA D-15)	TCL VOCs, Total Dissolved Solids (TDS), Total Organic Carbon (TOC), Total Organic Halides (TOX), pH, specific conductance TCL SVOCs, Target Analyte List (TAL) Metals Monthly monitoring of leachate in the detection system with semi-annual reporting Calculation of the shallow bedrock ground water flow rate beneath the Impound 8 facility Statistical analysis of specific shallow bedrock ground water quality parameters between upgradient and downgradient wells
Lagoon 9A area wells (RCRA D-12 through RCRA D-15)	Comparison of shallow bedrock ground water quality in upgradient wells to downgradient wells in the Lagoon 9A area to determine the effectiveness of the Lagoon 9A closure.
All wells and staff gauges	Water level measurements Ground water contour maps Comparison of the ground water quality to the NJDEP Ground Water Quality Standards

Source: O’Brien & Gere

In July of 1996, a ROD was issued by the NJDEP for the Hill Property portion of the site. The ROD includes provisions for a Classification Exception Area (CEA) covering the ground water beneath the Hill Property. This ground water was monitored by bedrock wells PW-16, PW-17, PW-18, and perimeter bedrock well UU. Low levels of some organic compounds were observed in these wells at the time of the ROD CEA.

The Hill Property monitoring requirements were modified as detailed in the AHP correspondence dated January 8, 1998 and approved by the NJDEP on February 18, 1998. The modifications include the elimination of Hill Property wells PW-17, PW-18, well UU, and well MJ from the site-wide ground water monitoring program. Ground water elevations will continue to be measured in well MJ to provide a data point in this vicinity. Groundwater elevations were measured in well MJ until the first quarter 2008 monitoring event. Beginning with the second quarter 2008 monitoring event measurements were discontinued due to the continued flooding of the well vault and modifications made by the owner that prevented access.

Discontinuation of monitoring of well PW-16 was approved by NJDEP in correspondence dated September 8, 2004, based on VOC results being observed below NJDEP Ground Water Quality Standards (GWQS) for two consecutive events (Fourth Quarter 2003 and Second Quarter 2004). PW-16 continues to be monitored for ground water elevation.

1.2. Objectives

This report has been developed to document that the following objectives have been met:

- complete the requirements of the ACO Amendment

- monitor the ground water elevation and/or ground water quality of the following areas:

  - Perimeter wells
  - Production wells
  - Hill property well
  - Impoundment 3, 4, and 5 areas
  - Impoundment 14 area
  - Group II Impoundment area
  - Lagoons 6 and 7, and Impoundment 19 and 24 areas

- monitor the Impound 8 ground water well network to gauge the effectiveness of the Impound 8 interceptor trench and cut-off wall

- maintain the Impound 8 shallow bedrock ground water monitoring well network to detect potential releases from the Impound 8 Facility

1.3. Report Organization

This report presents the field and laboratory data compiled to fulfill the requirements of the ACO Amendment for the second half 2009 sampling event. A description of the remaining sections of this report is provided below:

Section 2: Site geology and hydrogeology - provides background information and a discussion of the ongoing site wide ground water extraction (pumping) program, and provides information specific to the Impound 8 facility.

Section 3: Site-wide semi-annual monitoring - provides ground water flow and quality information for overburden ground water in the vicinity of on-site impoundments, and bedrock ground water in the perimeter monitoring wells and production wells.

Section 4: Impound 8 semi-annual monitoring - provides a discussion of the overburden, leachate, and the shallow bedrock monitoring activities.

2. Site Hydrogeology

There have been a number of ground water reports developed based upon site research and investigations. A limited listing of relevant reports is provided as Table 2-1. Select information from these studies, and past ground water monitoring reports, is briefly discussed in the following sections. Further discussion regarding hydrogeology at the site can be found in the Remedial Investigation Report (RIR) for Ground Water (HydroQual, 2006) and the Supplemental (RIR) for Ground Water (HydroQual, 2007), approved by NJDEP and USEPA.

The horizontal component of ground water flow within the overburden deposits is essentially southward toward the Raritan River. Based on Camp Dresser, & McKee modeling of the site in 1985 and recent vertical gradient data from some of the multi-level bedrock wells, overburden ground water in the main plant area tends to flow downward into the underlying bedrock. Pumping of the production wells reduces the piezometric head in the bedrock and induces ground water flow from the overlying overburden materials toward the production wells. South of a line paralleling the Lehigh-Reading Railroad tracks, the bedrock pumping does not appear to influence overburden ground water and flow is generally south toward the Raritan River.

Ground water flow within the Passaic Formation is predominantly a function of secondary permeability (flow through joints and fractures within the bedrock). Packer test data obtained by CDM (1985 and 1992) indicate two extensive zones of joints and fractures that correlate with the bedding plane jointing and are further categorized as the highly and moderately transmissive zones, separated by zones of more competent bedrock (lower hydraulic conductivity). These zones supply the production wells with their high yield of ground water and are a principal pathway for ground water contaminant transport at the site. A third zone (SS conductive zone) was identified by CDM (1985) subcropping south of the Raritan River. The SS conductive zone is not hydraulically connected to the transmissive zones within the plant, and is not influenced by pumping of the production wells. A subvertical fracture trending northwest through the main plant was identified by CDM (1992) in production test wells TW-2 and TW-3 which are located in the main plant and correlates with the near vertical joint pattern discussed in Section 2.2. The results of a 72-hour pump test performed in test well TW-2 showed that the subvertical fracture zone is hydraulically connected to the highly and moderately transmissive zones identified by CDM in 1985. TW-2 and TW-3 have since been designated as PW-2 and PW-3, and have been pumping as replacement production wells since March 23, 1994.

As part of the production well startup, monitoring of the replacement wells PW-2 and PW-3 for a period of 30 days showed improved hydraulic containment in the main plant and portions of the impoundment areas. This is described in the "Final Summary Report, Start-up of Production Wells PW-2 and PW-3" dated August 1994 (CDM). Further, horizontal hydraulic gradients between the main plant and the former production wells on the Hill Property have been reversed, with ground water flow now being toward the main plant from the former production wells.

In the southern portion of the site (south of the Lehigh Valley Railroad tracks), the major controlling feature is the Raritan River which acts as a regional ground water discharge zone. Areas indicative of discharge to the Raritan River are generally characterized by a natural upward hydraulic gradient as observed in the multiport well SS (HydroQual, 2007).

The zone of influence created by the production well pumping encompasses the main plant portion of the site. Ground water elevation contour mapping (Figure 3-4) has shown an east-west elongation in the zone of influence, caused by the orientation of the highly and moderately transmissive zones, the apparent termination of the subvertical fracture zone within the main plant, and the distribution of monitoring wells. The portion of the site south of the Lehigh-Reading Railroad tracks, however, was identified as an area where production well influence is limited (CDM 1985 and HydroQual, 2007).

3. Site-Wide Semi-Annual Monitoring

Overburden ground water elevations and ground water quality are monitored in areas of the site as specified by the ACO Amendment and the ROD for the Group II Impoundments. The locations of the site-wide overburden monitoring wells are shown on Figure 3-1.

The bedrock system, as specified by the ACO, is currently monitored by 19 bedrock wells, as shown on Figure 3-2.

On March 23, 1994, ground water pumping for production was switched from former production wells PW-16, PW-17, and PW-18 to wells PW-2 and PW-3 under a program approved by the NJDEP.

The ACO requires ground water to be pumped at a minimum weekly average of 650,000 gallons per day. The site production well pumping information for the second half 2009 is provided as Table 3-1. Pumping volumes from the second quarter 1988 through the second half 2009 are provided on Table 3-2. The volume of water treated during the second half 2009 was 118,148,241 gallons, and the total volume of ground water treated since July 1988 is 5,210,000,000 gallons.

3.1. Overburden Water Level Measurements

Site-wide overburden ground water elevation measurements were obtained on October 5, 2009. The elevation data and changes in elevations between October 5, 2009 and the last report are presented in Table 3-3.

An overburden ground water elevation contour map has been prepared for the Main Plant area and is provided as Figure 3-3. The following provides a description of the ground water elevation data for each of the four areas required to be monitored by the ACO.

3.1.1. Impoundment 3, 4, and 5

Wells 28R, MW-2, MW-3, MW-5, MW-7, and MW-9 are monitored for the Impoundment 3, 4 and 5 areas (Figure 3-3). The ground water flow direction in this area for the second half 2009 monitoring event is generally to the south with flow potentials converging in the vicinity of well MW-2. This ground water pattern is similar to historical flow patterns. The change in ground water elevations in this area is consistent with previous data.

3.1.2 Impoundment 14

The ground water flow direction in the area of Impoundment 14, as monitored by wells 19R, 21R, and O-R, indicates a southeasterly hydraulic gradient away from Cuckolds Brook, towards the center of the plant, which is consistent with previous findings (Figure 3-3). The change in ground water elevations is consistent with previous data.

3.1.3 Group II Impoundment

The ground water flow direction in the area of the Group II Impoundments, monitored by wells AAA, CCC-R, EEE-R, and 16MW-2, is generally to the south across the Group II Impoundments (Figure 3-3). The change in ground water elevations is consistent with previous data.

3.1.4 Lagoon 6 and 7 and Impoundment 19 and 24

Elevation changes for the Lagoon 6 and 7 and Impoundments 19 and 24 areas are consistent with historic data. The current ground water elevations in wells 32-R, 34-R, 38-R, 42-R, and TFP-94-1R, indicate mounding beneath Lagoon 7 with a portion of ground water flow directed to the southwest toward the Raritan River, and a portion directed to the northeast toward Cuckold's Brook, which is similar to historic ground water flow patterns (Figure 3-3).

3.2. Bedrock Water Level Measurements

Bedrock water level measurements obtained on October 5, 2009 are presented in Table 3-4. Between the third quarter 2005, and fourth quarter 2005 bedrock wells SS, TT, WW, XX, YY, ZZ, EEEE, FFFF, and GGGG were retrofitted with FLUTe® liners with discrete monitoring ports. The FLUTe® system is composed of several ports that target discrete flow zones. FLUTe® procedures are provided in Appendix A. Table 3-4 also provides a summary of the monitoring port elevations and their associated ground water elevations. Prior to the FLUTe® liner installations, historical measurements were representative of average ground water elevations of the entire open interval in each well. Since the ground water elevations obtained from the bedrock wells in which FLUTe® liners were installed are representative of discrete flow zones, comparison of these elevations with historic elevations prior to FLUTe® liner installation is not appropriate. Ground water elevation measurements from each port have been compared to previous FLUTe® measurements. For consistency, the remaining bedrock wells (MJ, AAAA, BBBB, CCCC, DDDD, IIII, and JJJJ) without FLUTe® liners have been compared to historical measurements. Ground water elevations and the changes in elevations from the previous monitoring event are presented in Table 3-4.

Flowing artesian conditions were observed at monitoring points IIII-D and JJJJ-D during the monitoring events from the fourth quarter 2006 through the third quarter 2007, and from the first quarter 2008 through the second half 2009. Starting with the second quarter 2008, wells IIII-D and JJJJ-D were temporarily modified by attaching a temporary casing extension to each of the wells prior to water depth gauging. Each temporary casing used is permanently designated to the well in order to preserve accurate measurements. The new top of casing elevation is calculated by adding the length of temporary casing to the surveyed elevation.

A bedrock ground water contour map, prepared using ground water elevations from wells PW-2, PW-3, PW-16, SS (Port 1), TT (Port1), WW (Port 1), XX (Port 1), YY (Port 3), ZZ (Port 1), AAAA-S, BBBB-S, CCCC-S, DDDD-O, EEEE (Port 4), FFFF (Port 3), GGGG (Port 2), IIII-S, and JJJJ-O, is provided as Figure 3-4.

Wells and FLUTe® ports used to produce the contour map were selected to represent the upper moderately conductive zone. Wells that did not have screens that intersected the upper moderately conductive zone including SS (Port 1), WW (Port 1), XX (Port 1), ZZ (Port 1), AAAA-S, CCCC-S, GGGG (Port 3), IIII-S, and JJJJ-O were selected based on screen depth that most closely correlated in depth to adjacent wells that had a screen that did intersect the zone.

3.2.1. Production Wells

Ground water elevations and the elevation changes in the Production Wells (PW-2 and PW-3) from the previous monitoring event are presented in Table 3-4. The production well zone of influence, based on the October 5, 2009 ground water elevations appears to be similar to the zone of influence observed at these locations during previous events (Figure 3-4).

3.2.2. Perimeter Wells

Ground water elevations and the elevation changes in the perimeter bedrock wells (SS, TT, WW, XX, YY, and ZZ) from the previous monitoring event are presented in Table 3-4.

3.2.3. Main Plant

Ground water elevations and the elevation changes for the Main Plant bedrock wells (AAAA, BBBB, CCCC, DDDD, EEEE, FFFF, GGGG, IIII, and JJJJ) from the previous monitoring event are presented in Table 3-4. The vertical gradients noted in the Main Plant wells are the result of varying degrees of hydraulic communication between the transmissive zones at various well locations due to pumping of the production wells. Vertical gradients noted at wells IIII and JJJJ, located within the Raritan River floodplain, suggest ground water discharge to the Raritan River from the deep bedrock.

3.3. Overburden Ground Water Quality

In a letter dated October 11, 2005, NJDEP accepted the use of passive diffusion bags (PDBs) for volatile organic compound (VOC) sample collection from the overburden monitoring wells sampled as part of the monitoring program. Based on this acceptance, PDBs were installed on August 20, 2009 in the overburden monitoring wells to be sampled during the second half 2009 monitoring event. Installation and sampling procedures for PDBs are provided in Appendix A. A PDB specification summary table and checklists for the submission of sampling data for PDBs are provided in Appendix B.

Accutest Laboratories, Inc. of Dayton, New Jersey (Accutest) collected ground water samples from the following areas between October 6 and October 9, 2009: Impoundment 3, 4, and 5, Impoundment 14, Group II impoundment, and Lagoon 6 and 7 and Impoundment 19 and 24. Accutest (NJ Certification No. 12129) also performed laboratory analysis of the ground water samples.

Measurements of specific conductance, pH, temperature, dissolved oxygen, and turbidity were recorded in the field. These data are presented in Appendix B. Trend graphs for constituents historically and currently detected in samples during monitoring at the site are included in Appendix C. The ground water analytical data is provided in Tables 3-5, 3-6, 3-7, and 3-8. The data were reviewed in accordance with NJDEP procedures. These data were evaluated using the NJDEP Electronic Data Systems Application Checker program and no errors were evident. A data validation review is provided in Appendix D.

The concentrations of benzo(B)fluoranthene in well 19R was detected above GWQS during the second half 2009 sampling event for the first time since the start of sampling. The concentration of bis(2-ethylhexyl)phthalate in monitoring well MW-2 and n-Nitrosodiphenylamine in monitoring well 38R, decreased from highest concentrations observed during the first half 2009. The detection of 1,2,4-trichlorobenzene in well 42R during the second half 2009 sampling event was the first detection above the GWQS since the second quarter 2003 sampling event. The remaining VOC and SVOC concentrations in overburden ground water collected during the second half 2009 monitoring event are within their respective ranges of historic fluctuations.

The concentration of arsenic in well 42R has decreased to the lowest concentration observed to date during the second half 2009 monitoring event. The concentrations of iron and arsenic in monitoring well CCC-R, decreased from highest concentrations observed during the first half 2009 monitoring event. The remaining metals concentrations in overburden ground water collected during the second half 2009 monitoring event are within their respective ranges of historic fluctuation.

The concentration of Radium-228 in wells CCC-R, EEE-R, and KKK were detected at their highest concentration observed to date during the second half 2009. The concentrations of Radium-228 will be closely monitored during future sampling events.

3.4. Bedrock Ground Water Quality

Bedrock ground water quality was obtained from October 6 and October 8, 2009 and is presented below. As noted in section 3.2, bedrock wells SS, TT, WW, XX, YY, ZZ, EEEE, and FFFF, were retrofitted with FLUTe® liners with discrete monitoring ports for ground water sampling. FLUTe® procedures are provided in Appendix A.

Accutest collected ground water samples from the six perimeter bedrock monitoring wells and the active production wells. Accutest also performed laboratory analysis of the ground water samples. Specific conductance, pH, turbidity, dissolved oxygen, and temperature measurements were recorded in the field and are presented on the field sampling logs in Appendix B. Trend graphs for constituents historically and currently detected in samples during monitoring at the site are included in Appendix C. The ground water analytical data is provided in Tables 3-5, 3-6, 3-7, and 3-8. The data were reviewed in accordance with NJDEP procedures. These data were evaluated using the NJDEP Electronic Data Systems Application Checker program and no errors were evident. The data validation review is provided in Appendix D.

Concentrations of tetrachloroethene in well YY P3 and trichloroethene in well TT P2 were detected at their lowest concentration observed to date, continuing a decreasing trend. The remaining VOC and SVOC concentrations in bedrock ground water for the second half 2009 monitoring event are within the range of historic fluctuations.

The concentrations of metals are within the range of historic fluctuations and will continue to be closely monitored during future monitoring events.

Concentrations of benzene in well PW-3 and chlorobenzene in well PW-2 decreased to their lowest concentration observed to date during the second half 2009 monitoring event. The remaining VOC and SVOC results are consistent with previously detected results.

4. Impound 8 Semi-Annual Monitoring

A total of fifteen shallow bedrock monitoring wells are sampled around the Impound 8 Facility to detect potential releases to ground water. The monitoring program for the Impound 8 Facility is described in the NJDEP-approved GWDMP.

4.1. Overburden Ground Water and Impound 8 Leachate

4.1.1. Ground Water Elevation Measurement

Ground water elevation measurements were obtained on October 5, 2009. The overburden ground water measurements are used to evaluate the effectiveness of the ground water interceptor trench and ground water cut-off wall in minimizing overburden ground water flow within Impound 8. The ground water elevation data and elevation changes between October 5, 2009 and the previous monitoring event have been summarized and are provided on Table 4-1. Ground water elevation changes were consistent with historic variations. An Impound 8 monitoring well location plan is provided as Figure 4-1.

Based on the October 5, 2009 ground water elevation data, the monitoring wells that are hydraulically upgradient of the groundwater interceptor trench and ground water cut-off wall include RCRA-S3, RCRA-S4, RCRA-S9, and RCRA-S11.

Monitoring wells that are hydraulically downgradient of the ground water interceptor trench and ground water cut-off wall include RCRA-S2, RCRA-S5, RCRA-S6, RCRA-S7, RCRA-S8, RCRA-S10, RCRA-S12, RCRA-S13R, RCRA-S14, and RCRA-S15. Consistent with previous monitoring data, wells RCRA-S2, RCRA-S5, RCRA-S6, RCRA-S12, and RCRA-S13R were dry. Wells RCRA-S7, RCRA-S8, RCRA-S10, RCRA-S14, and RCRA-S15 contained ground water. The overburden wells downgradient of the interceptor trench and cut-off wall that typically contain measurable ground water levels (RCRA-S7, RCRA-S9, RCRA-S14, and RCRA-S15) are located within an area that has a greater thickness of overburden due to a bedrock trough that runs from the northwest to the southeast along the southwest portion of Impound 8.

Due to the limited occurrence of ground water in the overburden ground water zone, a contour map has not been generated. However, Figure 4-2 depicts the water elevations observed during this second half monitoring event. As evidenced by the consistently lower ground water elevations in the wells hydraulically downgradient of the interceptor trench and cut-off wall, the system is effective in controlling overburden ground water at Impound 8.

The Cell 1, Cell 2, Cell 3, and Cell 4 leachate detection and collection systems have been constructed, and are being monitored in accordance with the ACO. The actual rates are determined by weekly monitoring of a flow-totalizing meter installed on the leachate detection system piping. The data that have been collected during the second half 2009 monitoring event are included in Appendix E. The Action Leakage Rate (ALR), as approved by the United States Environmental Protection Administration, is 21,302 gal per acre-day (gpad). Monitoring results from the second half 2009 monitoring event do not exceed the current ALR.

4.2. Shallow Bedrock Monitoring

As detailed in the Impound 8 Work Plan, ground water in the bedrock flows in a southwesterly direction under natural conditions. However, during the operation of a bedrock pumping well located approximately 300 ft to the northeast of the site, at Phillips Concrete Incorporated (formerly Mensing Cement Company), a divergent flow pattern develops. While the usual ground water flow direction is to the southwest, the influence of the pumping well has previously reversed the ground water flow direction under the northern portion of Impound 8, resulting in a northeasterly flow direction during pumping conditions. To account for this divergent flow pattern, the GWDMP has defined two sets of downgradient wells to monitor flow: RCRA D-1 through RCRA D-4 (to monitor the northeast flow); and RCRA D-7 through RCRA D-11 (to monitor the southwest flow). Shallow bedrock wells RCRA-D5, RCRA-D6, RCRA-D14, and RCRA-D15 have been designated as upgradient. A more detailed discussion of the bedrock hydrogeology and the divergent bedrock ground water flow pattern can be found in the GWDMP.

Ground water elevation measurements were obtained on October 5, 2009. Divergent flow was not evident based on the ground water elevations recorded on October 5, 2009 as part of the second half 2009 monitoring event.

In addition, the GWDMP provides a means to monitor potential impacts to ground water from Impound 9A. The GWDMP has identified wells RCRA-D14 and RCRA-D15 as upgradient and wells RCRA-D12 and RCRA-D13 as downgradient with respect to Impound 9A. These wells provide a means of comparison between water quality before and after passing beneath Lagoon 9A.

4.2.1. Ground Water Elevations

Shallow bedrock ground water elevation measurements obtained on October 5, 2009 are summarized on Table 4-1. A shallow bedrock ground water elevation map has been provided as Figure 4-3. The second half 2009 ground water elevations indicate a southerly flow direction consistent with historic ground water flow patterns (Figure 3-3).

Calculations of the estimated shallow bedrock ground water flow velocity on October 5, 2009 are included in Appendix F.

4.2.2. Impound 8 Ground Water Sampling and Analysis

Ground water sampling was performed between October 6 and 8 2009 at wells RCRA-D1 through RCRA-D15. The Impound 8 Facility shallow bedrock wells include a dedicated ground water sampling system. The system is the "QED-Well Wizard" comprised of dedicated pump tubing and bladders in each well, with dedicated on-site pneumatic controllers. Field sampling logs are presented in Appendix B.

The analytical parameters for the samples included the following:

- TCL VOCs
- TCL SVOCs
- TAL Metals
- TDS
- TOC
- TOX.

Analytical results for the second half 2009 ground water monitoring event are provided in Tables 4-2 through 4-5. The data were reviewed in accordance with NJDEP procedures. Trend graphs for constituents historically and currently detected in samples during monitoring at the site are included in

Appendix C. These data were evaluated using the NJDEP Electronic Data Systems Application Checker program and no errors were evident. A data validation review is provided in Appendix D.

The concentrations of benzo(A)anthracene in well RCRA-D3 was detected above GWQS during the second half 2009 sampling event for the first time since the start of sampling. The remaining SVOC concentrations in the impound 8 wells are within range of historic fluctuations.VOC concentrations in the Impound 8 ground water samples collected during the second half 2009 monitoring event are consistent with previously detected results.

Aluminum was detected above GWQS in well RCRA-D12 for the first time since fourth quarter 2005. The concentration of sodium, in monitoring wells RCRA-D6 and RCRA-D7 decreased from historic highest concentrations that were detected during the first half 2009 sampling event. The remaining metals concentrations in the Impound 8 wells are within the range of historic fluctuations. TOC, TDS, and TOX concentrations were within the range of historic fluctuations during the second half 2009 monitoring event.

4.2.3. Impound 8 Statistical Analysis

In accordance with the ACO Amendment, statistical analyses are required to be performed comparing downgradient ground water quality as monitored by wells RCRA-D1 through RCRA-D4 and RCRA-D7 through RCRA-D11, to upgradient ground water quality as monitored by wells RCRA-D5, RCRA-D6, RCRA-D14, and RCRA-D15. It is noted that the ground water elevations recorded on October 5, 2009 do not indicate a divergent ground water flow pattern and the “upgradient/downgradient” well designations stated in the GWDMP may not be reflected based on the October 5, 2009 elevations. However, the designations specified in the GWDMP are maintained in this report since there remains potential for divergent flow due to the off-site pumping.

A set of stipulated parameters has been identified to determine if there is statistical significance between ground water quality from the upgradient and downgradient shallow bedrock monitoring wells. The stipulated parameters are listed below:

- Benzene
- Chlorobenzene
- Chloroform
- Ethylbenzene
- Tetrachloroethene
- Toluene
- 1,1,1-Trichloroethane
- Trichloroethene
- pH
- TDS
- TOC
- TOX
- Specific Conductivity

The required statistical analysis is the Dunnett's Multiple Comparison T-test method. A description of this method is provided in Appendix G. The statistical evaluation of results can only be conducted if the downgradient monitoring wells have detectable concentrations of the parameters identified, and there is variance in the upgradient well concentrations.

Statistical analyses were performed for the following stipulated parameters: pH, specific conductivity, TOC, TDS, chloroform, tetrachloroethene, and trichloroethene. Statistical analyses were not performed for TOX, benzene, chlorobenzene, ethylbenzene, 1,1,1-trichloroethane, or toluene as these parameters were not detected in the upgradient or downgradient monitoring wells.

Appendix H contains the statistical data. The calculated T-values were below the critical T-values of 5.61 for pH and 4.31 for the remaining parameters for which the statistical analyses were conducted.

4.2.4. Lagoon 9A Sampling and Analysis

In accordance with the GWDMP for the Impound 8 Facility, and the ACO amendment, a qualitative comparison between upgradient and downgradient wells in the Lagoon 9A area is required and was completed. This analysis is designed to monitor the effectiveness of the closure and potential impacts to ground water quality. Tables 4-2 through 4-5 provide a summary of the analytical results from the second half 2009 monitoring event. Trend graphs for constituents historically and currently detected in samples during monitoring at the site are included in Appendix C.

The GWDMP has identified wells RCRA-D14 and RCRA-D15 as upgradient shallow bedrock monitoring wells in relation to Lagoon 9A. Shallow bedrock monitoring wells RCRA-D12 and RCRA-D13 were identified as downgradient of Lagoon 9A. Wells RCRA-D12 and RCRA-D13 were installed to evaluate potential impacts of Lagoon 9A, and were not intended for use in the Impound 8 upgradient evaluation. This arrangement allows comparisons between upgradient ground water quality, relative to Impound 8, before and after ground water passes beneath Lagoon 9A. Review of the October 5, 2009 shallow bedrock ground water elevation data and map presented as Figure 4-3 indicates that well RCRA-D14 has a higher ground water elevation compared to well RCRA-D13 and well RCRA-D15 has a higher ground water elevation compared to well RCRA-D12. Therefore, wells RCRA-D14 and RCRA-D15 can be considered upgradient of Lagoon 9A at the time of the October 5, 2009 ground water elevation measurements.

VOCs and SVOCs were not detected above GWQS in the upgradient or downgradient wells during the second half 2009 monitoring event, with the exception of upgradient well RCRA-D15. Historically, a number of VOCs have consistently been detected above GWQS in this well. Metals, TDS, TOC, and TOX results for the second half 2009 monitoring event were within the range of historic fluctuations.

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Table 2-1. ***Reference Summary***

Date	Author	Title/Item
1978	Geraghty & Miller	Study of Ground Water Conditions
1985	Camp, Dresser & McKee	Development of Ground Water Model
1988	Blasland, Bouck & Lee	Quarterly Monitoring Program
1988	Blasland, Bouck & Lee	Impound 8 Ground Water Detection Monitoring Work Plan
1988	Blasland, Bouck & Lee	Impound 8 Facility Final Design Report
1988	Blasland, Bouck & Lee	Impound 8 Facility Implementation Plan
1991	Camp, Dresser & McKee	Hydro-geologic Test Plan for Production Wells
1992	Camp, Dresser & McKee	Relocation of Production Wells, Pump Test Report
1994	Camp, Dresser & McKee	Final Summary Report, Startup of Production wells PW-2 and PW-3
1995	Camp, Dresser & McKee	First Quarter 1995, ACO Amendment Ground Water Monitoring Program
1998	O'Brien &Gere Engineers, Inc.	Impound 8 Facility Ground Water Monitoring Fourth Quarter 1997
1998	O'Brien &Gere Engineers, Inc.	Impound 8 Facility Ground Water Monitoring First Quarter 1998
1998	O'Brien &Gere Engineers, Inc.	Impound 8 Facility Ground Water Monitoring Second Quarter 1998
1998	O'Brien &Gere Engineers, Inc.	Impound 8 Facility Ground Water Monitoring Third Quarter 1998
1998	O'Brien &Gere Engineers, Inc.	Site-Wide Ground Water Monitoring Fourth Quarter 1997
1998	O'Brien &Gere Engineers, Inc.	Site-Wide Ground Water Monitoring First Quarter 1998
1998	O'Brien &Gere Engineers, Inc.	Site-Wide Ground Water Monitoring Second Quarter 1998
1998	O'Brien &Gere Engineers, Inc.	Site-Wide Ground Water Monitoring Third Quarter 1998
1998-2008	O'Brien &Gere Engineers, Inc.	Site-Wide Ground Water Monitoring Fourth Quarter 1998 - Fourth Quarter 2008
2009	O'Brien &Gere Engineers, Inc.	First Semi-Annual 2009

(Table by O'Brien & Gere Engineers Inc.)

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Table 3-1. *Site Production Well Pumping Information*

Period Ending	Hours PW2	Hours PW3	Gallons (Weekly Average)	Notes
7/3/2009	168	0	663,000	
7/10/2009	120	48	664,000	
7/17/2009	0	168	664,000	
7/24/2009	0	168	670,000	
7/31/2009	0	168	663,000	
8/7/2009	96	96	666,000	
8/14/2009	168	0	666,000	
8/21/2009	168	0	659,000	
8/28/2009	168	0	659,000	
9/4/2009	168	0	666,000	
9/11/2009	120	48	661,000	
9/18/2009	0	168	663,000	
9/25/2009	0	168	663,000	
10/2/2009	0	168	663,000	
10/9/2009	72	96	660,000	
10/16/2009	168	0	666,000	
10/23/2009	168	0	664,000	
10/30/2009	168	0	663,000	
11/6/2009	168	0	667,000	
11/13/2009	120	48	662,000	
11/20/2009	0	168	659,000	
11/27/2009	0	168	667,000	
12/4/2009	0	168	673,000	
12/11/2009	48	120	664,000	
12/18/2009	168	0	665,000	
12/25/2009	168	0	663,000	

Notes:

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Table 3-2. *Site Production Well Historical Pumping Information*

Report Date	Report Interval	Total Production Well Volume		Running Total Volume
July-1988	2Q88	24,050,000	*	24,050,000
October-1988	3Q88	59,800,000	*	83,850,000
January-1989	4Q88	59,800,000	*	143,650,000
April-1989	1Q89	58,500,000	*	202,150,000
July-1989	2Q89	59,150,000	*	261,300,000
October-1989	3Q89	59,800,000	*	321,100,000
January-1990	4Q89	59,800,000	*	380,900,000
April-1990	1Q90	58,500,000	*	439,400,000
July-1990	2Q90	59,150,000	*	498,550,000
October-1990	3Q90	59,800,000	*	558,350,000
January-1991	4Q90	59,800,000	*	618,150,000
April-1991	1Q91	58,500,000	*	676,650,000
July-1991	2Q91	59,150,000	*	735,800,000
October-1991	3Q91	59,800,000	*	795,600,000
January-1992	4Q91	59,800,000	*	855,400,000
April-1992	1Q92	59,150,000	*	914,550,000
July-1992	2Q92	59,150,000	*	973,700,000
October-1992	3Q92	59,800,000	*	1,033,500,000
January-1993	4Q92	59,800,000	*	1,093,300,000
April-1993	1Q93	58,500,000	*	1,151,800,000
July-1993	2Q93	59,150,000	*	1,210,950,000
October-1993	3Q93	59,800,000	*	1,270,750,000
January-1994	4Q93	59,800,000	*	1,330,550,000
March-1994	1Q94	58,500,000	*	1,389,050,000
July-1994	2Q94	59,150,000	*	1,448,200,000
September-1994	3Q94	59,800,000	*	1,508,000,000
January-1995	4Q94	59,800,000	*	1,567,800,000
April-1995	1Q95	58,500,000	*	1,626,300,000
July-1995	2Q95	60,200,000		1,686,500,000
October-1995	3Q95	59,800,000	*	1,746,300,000
March-1996	4Q95	63,100,000		1,809,400,000
April-1996	1Q96	63,100,000		1,872,500,000
July-1996	2Q96	61,400,000		1,933,900,000
October-1996	3Q96	61,800,000		1,995,700,000
January-1997	4Q96	61,900,000		2,057,600,000
April-1997	1Q97	62,600,000		2,120,200,000
July-1997	2Q97	62,700,000		2,182,900,000
October-1997	3Q97	62,600,000		2,245,500,000
January-1998	4Q97	62,900,000		2,308,400,000
April-1998	1Q98	61,300,000		2,369,700,000
July-1998	2Q98	61,900,000		2,431,600,000
October-1998	3Q98	62,700,000		2,494,300,000

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Table 3-2. *Site Production Well Historical Pumping Information*

Report Date	Report Interval	Total Production Well Volume		Running Total Volume
January-1999	4Q98	62,600,000		2,556,900,000
April-1999	1Q99	58,500,000	*	2,615,400,000
July-1999	2Q99	61,100,000		2,676,500,000
October-1999	3Q99	55,685,000		2,732,185,000
January-2000	4Q99	64,440,000		2,796,625,000
April-2000	1Q00	62,980,000		2,859,605,000
July-2000	2Q00	59,920,000		2,919,525,000
October-2000	3Q00	59,800,000	*	2,979,325,000
January-2001	4Q00	59,800,000	*	3,039,125,000
April-2001	1Q01	59,410,000		3,098,535,000
July-2001	2Q01	59,759,000		3,158,294,000
October-2001	3Q01	59,612,000		3,217,906,000
January-2002	4Q01	59,800,000	*	3,277,706,000
April-2002	1Q02	58,854,000		3,336,560,000
July-2002	2Q02	61,826,000		3,398,386,000
October-2002	3Q02	60,881,500		3,459,267,500
January-2003	4Q02	61,941,000		3,521,208,500
April-2003	1Q03	59,980,000		3,581,188,500
July-2003	2Q03	60,358,000		3,641,546,500
October-2003	3Q03	60,058,000		3,701,604,500
January-2004	4Q03	61,064,000		3,762,668,500
April-2004	1Q04	52,125,000		3,814,793,500
July-2004	2Q04	60,355,000		3,875,148,500
October-2004	3Q04	60,887,000		3,936,035,500
January-2005	4Q04	61,770,000		3,997,805,500
April-2005	1Q05	60,378,000		4,058,183,500
July-2005	2Q05	61,454,000		4,119,637,500
October-2005	3Q05	60,842,000		4,180,479,500
January-2006	4Q05	60,961,000		4,241,440,500
April-2006	1Q06	59,871,000		4,301,311,500
July-2006	2Q06	60,320,000		4,361,631,500
October-2006	3Q06	60,306,000		4,421,937,500
January-2007	4Q06	61,389,000		4,483,326,500
April-2007	1Q07	59,537,000		4,542,863,500
July-2007	2Q07	60,420,000		4,603,283,500
October-2007	3Q07	61,084,000		4,664,367,500
January-2008	4Q07	61,133,000		4,725,500,500
April-2008	1Q08	60,312,000		4,785,812,500
July-2008	2Q08	60,314,000		4,846,126,500
October-2008	3Q08	60,974,000		4,907,100,500
January-2009	4Q08	61,238,000		4,968,338,500
July-2009	1H09	120,201,000		5,088,539,500
December-2009	2H09	122,131,000		5,210,670,500

Total to Date	5,211,000,000

* - defaulted to 650,000 gallons per week in absence of data

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Table 3-3. Overburden Ground Water Elevations - October 5, 2009

Well I.D.	Permit Number	Well Casing Elevation (ft msl)	Well Depth (ft BTOC)	Bottom of Well Elevation (ft msl)	Screened Interval Elevation (ft msl) Top	Bottom	Depth to Water (ft BTOC)	2009 First Semi-Annual Ground Water Elevation (ft msl)	2009 Second Semi-Annual Ground Water Elevation (ft msl)	Ground water Elevation Change (ft msl)
MW-2	25-33944-3	34.26	21.1	13.2	28.2	13.2	9.55	27.25	24.71	-2.54
MW-3	25-33945-1	35.94	22.2	13.7	28.7	13.7	8.77	29.10	27.17	-1.93
MW-5	25-33946-0	35.00	22.5	12.5	27.5	12.5	7.88	29.05	27.12	-1.93
MW-7	25-33949-4	34.47	21.7	12.8	27.8	12.8	6.53	30.22	27.94	-2.28
MW-9	25-33950-8	40.88	25.1	15.8	35.8	15.8	15.23	30.17	25.65	-4.52
MW-10	NA	40.13	22.0	18.1	36.1	18.1	6.68	33.84	33.45	-0.39
MW-12	NA	34.26	22.0	12.3	30.3	12.3	9.96	26.03	24.30	-1.73
MW-15	NA	30.36	23.0	7.4	27.4	7.4	3.98	27.56	26.38	-1.18
MW-17	NA	34.42	19.0	15.4	30.4	15.4	8.28	27.57	26.14	-1.43
MW-18A	NA	34.43	19.0	15.4	32.4	15.4	7.88	27.34	26.55	-0.79
MW-19	NA	34.21	20.0	14.2	32.2	14.2	8.85	26.50	25.36	-1.14
MW-22R	25-00065340	35.92	20.0	15.9	25.9	15.9	10.28	26.58	25.64	-0.94
MW-25	NA	34.37	16.5	17.9	30.4	17.9	8.75	27.13	25.62	-1.51
MW-28	NA	35.19	22.0	13.2	32.2	13.2	9.88	26.43	25.31	-1.12
MP11-W1S	25-00065339	33.72	18.0	15.7	25.7	15.7	8.72	26.19	25.00	-1.19
MW05-W1S	25-00065337	34.37	18.0	16.4	26.4	16.4	11.05	24.88	23.32	-1.56
28-R	NA	30.88	17.8	13.1	18.1	13.1	4.40	26.31	26.48	0.17
19-R	25-31283-9	36.94	11.6	25.3	30.3	25.3	3.96	33.35	32.98	-0.37
21-R	25-31284-7	51.71	22.6	29.1	34.1	29.1	18.51	33.70	33.20	-0.50
O-R	25-22855	37.61	17.9	19.7	24.7	19.7	6.57	31.96	31.04	-0.92
AAA	25-24942-8	29.31	16.8	12.5	17.5	12.5	6.34	23.90	22.97	-0.93
CCC-R	25-50084	39.63	26.5	13.1	18.1	13.1	17.48	23.61	22.15	-1.46
EEE-R	25-31282-1	37.98	25.1	12.9	17.9	12.9	16.45	23.23	21.53	-1.70
III	25-25027-2	30.69	19.8	10.9	15.9	10.9	5.63	26.47	25.06	-1.41
KKK	25-25029-9	39.63	28.3	11.3	16.3	11.3	15.94	25.31	23.69	-1.62
16MW-2	NA	28.8	16.1	12.7	17.7	12.7	5.35	24.17	23.45	-0.72
32-R	25-33063-2	38.65	20.4	18.3	23.3	18.3	9.73	30.30	28.92	-1.38
34-R	25-33062-4	42.91	26.3	16.6	21.6	16.6	17.98	26.48	24.93	-1.55
36-R	25-33061-6	39.47	24.7	14.8	19.8	14.8	13.53	27.78	25.94	-1.84
P24-91-1	25-39209	41.40	26.8	14.6	24.6	14.6	17.17	26.00	24.23	-1.77
38-R	25-33064-1	43.24	25.6	17.6	22.6	17.6	15.02	29.04	28.22	-0.82
41-R	25-33065-9	40.46	26.2	14.3	19.3	14.3	12.88	27.93	27.58	-0.35
42-R	25-33066-7	41.05	24.2	16.9	21.9	16.9	14.36	27.40	26.69	-0.71
TFP-94-1 R	25-49039	31.28	19.1	12.2	20.2	12.2	7.39	26.00	23.89	-2.11
Staff Gauge-1	NA	23.61	NA	NA	NA	NA	3.50	21.03	20.11	-0.92
Staff Gauge-4	NA	39.29	NA	NA	NA	NA	10.96	28.29	28.33	0.04
Staff Gauge-7	NA	19.19	NA	NA	NA	NA	NM	18.96	NM	NA
Staff Gauge-8	NA	33.82	NA	NA	NA	NA	5.96	27.91	27.86	-0.05
Staff Gauge-9	NA	31.29	NA	NA	NA	NA	5.58	25.79	25.71	-0.08
Staff Gauge-10	NA	34.78	NA	NA	NA	NA	NM	NM	NM	NA
Staff Gauge-11	NA	28.58	NA	NA	NA	NA	3.25	26.29	25.33	-0.96
Staff Gauge-12	NA	28.54	NA	NA	NA	NA	4.29	24.67	24.25	-0.42
Staff Gauge-14	NA	25.42	NA	NA	NA	NA	NM	NM	NM	NA
Staff Gauge-15	NA	21.63	NA	NA	NA	NA	NM	NM	NM	NA
Staff Gauge-16	NA	28.31	NA	NA	NA	NA	3.54	24.81	24.77	-0.04

Notes: ft BTOC - feet below top of casing
ft msl - feet mean sea level
NA - Not Available
NM - Not Measured

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Table 3-4 *Bedrock Water Elevations - October 5, 2009*

Well Number	Permit Number	Casing Elevation (ft msl)	Well Depth (ft BTOC)	Bottom of Well Elevation (ft msl)	Screened Interval Elevation (ft msl) Top	Screened Interval Elevation (ft msl) Bottom	Depth to Water (ft BTOC)	2009 First Semi-Annual Ground Water Elevation (ft msl)	2009 Second Semi-Annual Ground Water Elevation (ft msl)	Ground Water Elevation Change (ft msl)
Production Well										
PW-2*	25-42456	36.33	300.0	-263.7	-13.7	-263.7	82.86	-41.74	-46.53	-4.79
PW-3*	25-42216	36.49	299.0	-262.5	-13.5	-262.5	80.73	-42.35	-44.24	-1.89
Hill Property										
PW-16*	25-8217	56.73	404.0	-347.3	11.7	-347.3	36.09	21.12	20.64	-0.48
Perimeter Bedrock Wells										
SS (Port 1)	25-20094-3	32.31	60.0	-27.7	-20.0	-40.0	2.81	30.60	29.50	-1.10
SS (Port 2)	25-20094-3	32.31	255.0	-222.7	-215.0	-235.0	2.82	30.62	29.49	-1.13
SS (Port 3)	25-20094-3	32.31	382.0	-349.7	-342.0	-362.0	2.84	30.42	29.47	-0.95
TT (Port 1)	25-20095	47.81	75.0	-27.2	-17.0	-37.0	24.68	24.28	23.13	-1.15
TT (Port 2)	25-20095	47.81	192.0	-144.2	-134.0	-154.0	26.50	18.95	21.31	2.36
TT (Port 3)	25-20095	47.81	310.0	-262.2	-252.0	-272.0	70.87	-15.02	-23.06	-8.04
WW (Port 1)	25-20632-0	25.18	35.0	-9.8	-1.0	-21.0	9.57	16.97	15.61	-1.36
WW (Port 2)	25-20632-0	25.18	152.0	-126.8	-118.0	-138.0	9.08	17.55	16.10	-1.45
WW (Port 3)	25-20632-0	25.18	375.0	-349.8	-341.0	-361.0	8.65	18.00	16.53	-1.47
XX (Port 1)	25-20630	26.77	35.0	-8.2	0.0	-20.0	9.98	18.80	16.79	-2.01
XX (Port 2)	25-20630	26.77	190.0	-163.2	-155.0	-175.0	14.45	18.99	12.32	-6.67
XX (Port 3)	25-20630	26.77	380.0	-353.2	-345.0	-365.0	14.62	19.79	12.15	-7.64
YY (Port 1)	25-20631	72.19	55.5	16.7	34.0	14.0	20.55	32.66	51.64	18.98
YY (Port 2)	25-20631	72.19	170.5	-98.3	-81.0	-101.0	41.05	27.33	31.14	3.81
YY (Port 3)	25-20631	72.19	345.5	-273.3	-256.0	-276.0	52.87	23.18	19.32	-3.86
ZZ (Port 1)	25-20633-8	42.11	70.5	-28.4	-10.0	-30.0	13.02	30.26	29.09	-1.17
ZZ (Port 2)	25-20633-8	42.11	200.5	-158.4	-140.0	-160.0	12.32	30.68	29.79	-0.89
ZZ (Port 3)	25-20633-8	42.11	280.5	-238.4	-160.0	-220.0	5.72	37.42	36.39	-1.03
ZZ (Port 4)	25-20633-8	42.11	320.5	-278.4	-135.0	-167.0	5.91	37.11	36.20	-0.91
MJ*	NA	53.47	160.0	-106.5	NA	-106.5	NM	NA	NA	NA
Main Plant Bedrock Wells										
AAAA-O*	25-25419	32.61	82.3	-49.7	7.6	-49.7	7.80	26.10	24.81	-1.29
AAAA-shall	25-25419	32.41	123.4	-91.0	-77.6	-91.0	7.98	25.62	24.43	-1.19
AAAA-inter	25-25419	32.37	201.3	-168.9	-162.6	-168.9	9.30	24.20	23.07	-1.13
AAAA-deep	25-25419	32.4	300.0	-267.6	-257.6	-267.6	7.73	26.06	24.67	-1.39
BBBB-O*	25-25420-1	36.04	68.5	-32.5	-4.0	-32.5	10.58	26.60	25.46	-1.14
BBBB-shall	25-25420-1	36.22	164.4	-128.2	-108.8	-128.2	21.44	15.04	14.78	-0.26
BBBB-deep	25-25420-1	36.10	360.0	-323.9	-313.9	-323.9	114.94	-78.21	-78.84	-0.63
CCCC-shall	25-25421	39.14	59.4	-20.3	-19.0	-29.0	18.45	21.85	20.69	-1.16
CCCC-inter	25-25421	39.01	185.9	-146.9	-109.0	-119.0	12.39	27.41	26.62	-0.79
CCCC-deep	25-25421	38.55	375.0	-336.5	-259.0	-269.0	18.26	21.27	20.29	-0.98
DDDD-O*	25-25422	49.67	50.9	-1.2	9.7	-1.2	23.88	26.89	25.79	-1.10
DDDD-shall	25-25422	49.67	69.1	-19.4	-170.3	-180.3	44.24	6.66	5.43	-1.23
DDDD-deep	25-25422	49.67	365.0	-315.3	-305.3	-315.3	23.68	27.10	25.99	-1.11
EEEE (Port 1)	25-27783-9	62.04	55.5	6.5	26.0	6.0	37.35	25.43	24.69	-0.74
EEEE (Port 2)	25-27783-9	62.04	90.5	-28.5	-9.0	-29.0	37.30	25.54	24.74	-0.80
EEEE (Port 3)	25-27783-9	62.04	170.5	-108.5	-89.0	-109.0	39.08	23.82	22.96	-0.86
EEEE (Port 4)	25-27783-9	62.04	280.5	-218.5	-199.0	-219.0	41.54	21.29	20.50	-0.79
FFFF (Port 1)	25-27784-7	62.67	55.5	7.2	25.0	5.0	39.98	23.63	22.69	-0.94
FFFF (Port 2)	25-27784-7	62.67	95.5	-32.8	-15.0	-35.0	41.54	22.09	21.13	-0.96
FFFF (Port 3)	25-27784-7	62.67	200.5	-137.8	-120.0	-140.0	42.85	21.07	19.82	-1.25
FFFF (Port 4)	25-27784-7	62.67	275.5	-212.8	-195.0	-215.0	49.23	14.81	13.44	-1.37
GGGG (Port 1)	25-27785-5	51.04	60.0	-9.0	0.0	-20.0	39.91	21.46	11.13	-10.33
GGGG (Port 2)	25-27785-5	51.04	110.0	-59.0	-50.0	-70.0	30.40	21.23	20.64	-0.59
GGGG (Port 3)	25-27785-5	51.04	205.0	-154.0	-145.0	-165.0	30.14	13.47	20.90	7.43
IIII-O*	25-32189	28.24	80.7	-52.5	-9.8	-52.5	2.78	27.85	25.46	-2.39
IIII-shall	25-32189	28.24	172.4	-144.2	-116.8	-144.2	9.27	20.65	18.97	-1.68
IIII - deep	25-32189	28.24	320.0	-291.8	-251.8	-291.8	-1.12	29.19	29.36	0.17
JJJJ-O*	25-32190-1	28.80	36.3	-7.5	-9.2	-66.2	2.90	28.26	25.90	-2.36
JJJJ-shall	25-32190-1	28.80	225.8	-197.0	-161.2	-197.0	8.38	23.38	20.42	-2.96
JJJJ-deep	25-32190-1	28.80	395.0	-366.2	-336.2	-366.2	-0.78	29.58	29.58	0.00

Notes:
NA - Not Available
NM - Not Measured
ft BTOC - feet below top of casing
ft msl - feet mean sea level
* denotes open bedrock well
- Water level at well MJ was not gauged because modifications made by well owner prevent access.
- Beginning with the second quarter 2008 sampling event artesian flow at wells IIII-deep and JJJJ-deep will be measured.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	19R 10/8/2009 ug/l PDB	21R 10/7/2009 ug/l PDB	28R 10/8/2009 ug/l PDB
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	0.9 J
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	**6.1 Y**
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		36.7	10 U	10 U
Benzene	1		**9.6 Y**	1.0 U	0.98 J
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		1.6 J	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		10	1.0 U	42
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		0.24 J	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	0.65 J
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.2	1.0 U	0.4 J
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		53.5	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	**1.2 Y**
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		4.1	1.0 U	0.47 J

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	32R 10/7/2009 ug/l PDB	34R 10/8/2009 ug/l PDB	38R 10/9/2009 ug/l PDB
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	3.1 J
Benzene	1		1.0 U	**16.8 Y**	**15.7 Y**
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		27.5	**98.5 Y**	**82.4 Y**
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	5.5	7.6
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	0.89 J	1.4
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	6	4.4

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
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* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	42R 10/9/2009 ug/l PDB	AAA 10/9/2009 ug/l PDB	CCC-R 10/9/2009 ug/l PDB
1,1,1-Trichloroethane	30		5.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		5.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		5.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		5.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		5.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		5.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		5.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		50 U	10 U	10 U
2-Hexanone	100		25 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		25 U	5.0 U	5.0 U
Acetone	6000		50 U	10 U	3.5 J
Benzene	1		**40.2 Y**	1.0 U	1.0 U
Bromodichloromethane	1		5.0 U	1.0 U	1.0 U
Bromoform	4		20 U	4.0 U	4.0 U
Bromomethane	10		10 U	2.0 U	2.0 U
Carbon Disulfide	700		10 U	2.0 U	2.0 U
Carbon Tetrachloride	1		5.0 U	1.0 U	1.0 U
Chlorobenzene	50		**995 Y**	10.9	1.0 U
Chloroethane	100		5.0 U	1.0 U	1.0 U
Chloroform	70		5.0 U	1.0 U	1.0 U
Chloromethane	100		5.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		5.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		5.0 U	1.0 U	1.0 U
Dibromochloromethane	1		5.0 U	1.0 U	1.0 U
Ethylbenzene	700		81.5	1.0 U	1.0 U
Methylene Chloride	3		10 U	2.0 U	2.0 U
Styrene (Monomer)	100		25 U	5.0 U	5.0 U
Tetrachloroethene	1		5.0 U	1.0 U	1.0 U
Toluene	600		8	0.41 J	1.0 U
trans-1,2-Dichloroethene	100		5.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		5.0 U	1.0 U	1.0 U
Trichloroethene	1		5.0 U	1.0 U	1.0 U
Vinyl Chloride	1		5.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		58.8	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
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* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	CCC-R DUP 10/9/2009 ug/l PDB	EEE-R 10/9/2009 ug/l PDB	III 10/9/2009 ug/l PDB
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		2.9 J	10 U	2.9 J
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	KKK 10/9/2009 ug/l PDB	MW2 UPPER 10/9/2009 ug/l PDB	MW2 LOWER 10/9/2009 ug/l PDB
1,1,1-Trichloroethane	30		1.0 U	1.0 U	10 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	10 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	10 U
1,1-Dichloroethane	50		1.0 U	0.68 J	10 U
1,1-Dichloroethene	1		1.0 U	1.0 U	10 U
1,2-Dichloroethane	2		1.0 U	1.0 U	10 U
1,2-Dichloropropane	1		1.0 U	1.0 U	10 U
2-Butanone (Mek)	300		10 U	3.7 J	100 U
2-Hexanone	100		5.0 U	5.0 U	50 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	28.6	24.2 J
Acetone	6000		3.8 J	23.4	100 U
Benzene	1		0.36 J	**334 Y**	**1710 Y**
Bromodichloromethane	1		1.0 U	1.0 U	10 U
Bromoform	4		4.0 U	4.0 U	40 U
Bromomethane	10		2.0 U	2.0 U	20 U
Carbon Disulfide	700		2.0 U	2.0 U	20 U
Carbon Tetrachloride	1		1.0 U	1.0 U	10 U
Chlorobenzene	50		1.0 U	43.8	**122 Y**
Chloroethane	100		1.0 U	1.0 U	10 U
Chloroform	70		1.0 U	1.0 U	10 U
Chloromethane	100		1.0 U	1.0 U	10 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	10 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	10 U
Dibromochloromethane	1		1.0 U	1.0 U	10 U
Ethylbenzene	700		1.0 U	40.4	45.5
Methylene Chloride	3		2.0 U	2.0 U	20 U
Styrene (Monomer)	100		5.0 U	5.0 U	50 U
Tetrachloroethene	1		1.0 U	0.9 J	10 U
Toluene	600		1.0 U	70.4	363
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	10 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	10 U
Trichloroethene	1		1.0 U	0.38 J	10 U
Vinyl Chloride	1		1.0 U	1.0 U	10 U
Xylenes (Total)	1000		1.0 U	329	400

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	O-R 10/7/2009 ug/l PDB	PW-2 10/6/2009 ug/l Tap [1]	PW-3 10/6/2009 ug/l Tap [1]
1,1,1-Trichloroethane	30		1.0 U	10 U	20 U
1,1,2,2-Tetrachloroethane	1		1.0 U	10 U	20 U
1,1,2-Trichloroethane	3		1.0 U	10 U	20 U
1,1-Dichloroethane	50		1.0 U	10 U	20 U
1,1-Dichloroethene	1		1.0 U	10 U	20 U
1,2-Dichloroethane	2		1.0 U	10 U	20 U
1,2-Dichloropropane	1		1.0 U	10 U	20 U
2-Butanone (Mek)	300		10 U	100 U	200 U
2-Hexanone	100		5.0 U	50 U	100 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	50 U	100 U
Acetone	6000		3.4 J	100 U	200 U
Benzene	1		0.9 J	**473 Y**	**560 Y**
Bromodichloromethane	1		1.0 U	10 U	20 U
Bromoform	4		4.0 U	40 U	80 U
Bromomethane	10		2.0 U	20 U	40 U
Carbon Disulfide	700		2.0 U	**1790 Y**	**2080 Y**
Carbon Tetrachloride	1		1.0 U	10 U	20 U
Chlorobenzene	50		3.0	**1020 Y**	**1030 Y**
Chloroethane	100		1.0 U	10 U	20 U
Chloroform	70		1.0 U	10 U	20 U
Chloromethane	100		1.0 U	10 U	20 U
cis-1,2-Dichloroethene	70		1.0 U	10 U	20 U
cis-1,3-Dichloropropylene	1		1.0 U	10 U	20 U
Dibromochloromethane	1		1.0 U	10 U	20 U
Ethylbenzene	700		1.0 U	3.2 J	20 U
Methylene Chloride	3		2.0 U	20 U	40 U
Styrene (Monomer)	100		5.0 U	50 U	100 U
Tetrachloroethene	1		1.0 U	10 U	20 U
Toluene	600		1.0 U	3.6 J	20 U
trans-1,2-Dichloroethene	100		1.0 U	10 U	20 U
trans-1,3-Dichloropropylene	1		1.0 U	10 U	20 U
Trichloroethene	1		1.0 U	10 U	20 U
Vinyl Chloride	1		1.0 U	10 U	20 U
Xylenes (Total)	1000		0.38 J	3.5 J	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID Sample Date Unit Sample Method	SS P1 10/6/2009 ug/l Valve [2]	SS P2 10/6/2009 ug/l Valve [2]	SS P3 10/6/2009 ug/l Valve [2]
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	TFP-94-1R 10/8/2009 ug/l PDB	TT P1 10/8/2009 ug/l Valve [2]	TT P2 10/8/2009 ug/l Valve [2]
1,1,1-Trichloroethane	30		100 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		100 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		100 U	1.0 U	1.0 U
1,1-Dichloroethane	50		100 U	1.0 U	1.0 U
1,1-Dichloroethene	1		100 U	0.57 J	1.0 U
1,2-Dichloroethane	2		100 U	1.0 U	1.0 U
1,2-Dichloropropane	1		100 U	1.0 U	1.0 U
2-Butanone (Mek)	300		1000 U	10 U	10 U
2-Hexanone	100		500 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		500 U	5.0 U	5.0 U
Acetone	6000		1000 U	10 U	10 U
Benzene	1		**85 J Y**	1.0 U	1.0 U
Bromodichloromethane	1		100 U	1.0 U	1.0 U
Bromoform	4		400 U	4.0 U	4.0 U
Bromomethane	10		200 U	2.0 U	2.0 U
Carbon Disulfide	700		200 U	2.0 U	2.0 U
Carbon Tetrachloride	1		100 U	1.0 U	1.0 U
Chlorobenzene	50		**6140 Y**	1.0 U	1.0 U
Chloroethane	100		100 U	1.0 U	1.0 U
Chloroform	70		100 U	1.0 U	1.0 U
Chloromethane	100		100 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		100 U	**187 Y**	12.5
cis-1,3-Dichloropropylene	1		100 U	1.0 U	1.0 U
Dibromochloromethane	1		100 U	1.0 U	1.0 U
Ethylbenzene	700		100 U	1.0 U	1.0 U
Methylene Chloride	3		200 U	2.0 U	2.0 U
Styrene (Monomer)	100		500 U	5.0 U	5.0 U
Tetrachloroethene	1		100 U	**32.5 Y**	**3.0 Y**
Toluene	600		100 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		100 U	5.6	0.36 J
trans-1,3-Dichloropropylene	1		100 U	1.0 U	1.0 U
Trichloroethene	1		100 U	**19.2 Y**	**2.6 Y**
Vinyl Chloride	1		100 U	**2.0 Y**	1.0 U
Xylenes (Total)	1000		100 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	TT P2 DUP 10/8/2009 ug/l Valve [2]	TT P3 10/8/2009 ug/l Valve [2]	WW P1 10/6/2009 ug/l Valve [2]
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	0.33 J	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		12.1	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		**2.8 Y**	1.0 U	0.67 J
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		0.37 J	0.31 J	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		**2.4 Y**	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	WW P2 10/6/2009 ug/l Valve [2]	WW P3 10/6/2009 ug/l Valve [2]	XX P1 10/6/2009 ug/l Valve [2]
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	XX P2 10/6/2009 ug/l Valve [2]	XX P3 10/7/2009 ug/l Valve [2]	YY P1 10/6/2009 ug/l Valve [2]
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

O'BRIEN & GERE ENGINEERS, INC.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	YY P2 10/6/2009 ug/l Valve 2	YY P3 10/6/2009 ug/l Valve 2	ZZ P1 10/6/2009 ug/l Valve 2
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	**2.0 Y**	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		0.4 J	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

O'BRIEN & GERE ENGINEERS, INC.

Table 3-5
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit / Sample Method	ZZ P2 10/6/2009 ug/l Valve [2]	ZZ P3 10/6/2009 ug/l Valve [2]	ZZ P4 10/6/2009 ug/l Valve [2]
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed
[1] - Sampled from tap inline with pump.
[2] - Valved tubing sampling system.

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	19R 10/8/2009 ug/l	28R 10/8/2009 ug/l	34R 10/8/2009 ug/l
1,2,4-Trichlorobenzene	9		2.0 U	0.64 J	0.62 J
1,2-Dichlorobenzene	600		2.0 U	22.4	16.5
1,3-Dichlorobenzene	600		2.0 U	2.0 U	19.1
1,4-Dichlorobenzene	75		2.0 U	2.2	7.4
2,4,5-Trichlorophenol	700		5.0 U	5.1 U	5.0 U
2,4,6-Trichlorophenol	20		5.0 U	5.1 U	5.0 U
2,4-Dichlorophenol	20		5.0 U	5.1 U	5.0 U
2,4-Dimethylphenol	100		**204 Y**	5.1 U	2.7 J
2,4-Dinitrophenol	40		20 U	20 U	20 U
2,4-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	600		50.1	5.1 U	4.4 J
2-Chlorophenol	40		5.0 U	5.1 U	5.0 U
2-Methylnaphthalene	100		80.4	2.0 U	2.0 U
2-Methylphenol	5		**59.8 Y**	2.0 U	2.0 U
2-Nitroaniline	100		5.0 U	5.1 U	5.0 U
2-Nitrophenol	100		5.0 U	5.1 U	5.0 U
3 & 4-Methylphenol	5		**232 Y**	2.0 U	2.0 U
3,3'-Dichlorobenzidine	30		5.0 U	5.1 U	5.0 U
3-Nitroaniline	100		5.0 U	5.1 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U	20 U	20 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U	5.1 U	5.0 U
4-Chloroaniline	30		5.0 U	5.1 U	5.0 U
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-Nitroaniline	100		5.0 U	5.1 U	5.0 U
4-Nitrophenol	100		10 U	10 U	10 U
Acenaphthene	400		23.5	0.1 U	11
Acenaphthylene	100		0.1 U	0.1 U	0.1 U
Anthracene	2000		0.1 U	0.1 U	3.65
Benzo(a)Anthracene	0.1		0.1 U	0.1 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	0.1 U	0.1 U
Benzo(b)Fluoranthene.	0.2		**0.773 Y**	0.1 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	0.1 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.253	0.1 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.0 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	19R 10/8/2009 ug/l	28R 10/8/2009 ug/l	34R 10/8/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		**58.4 Y**	1.2 J	1.5 J
Butyl Benzyl Phthalate	100		2.0 U	2.0 U	2.0 U
Carbazole	100		45.9	2.0 U	2.0 U
Chrysene	5		0.1 U	0.1 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.1 U	0.1 U
Dibenzofuran	100		17.4	5.1 U	7.3
Diethyl Phthalate	6000		2.0 U	2.0 U	2.0 U
Dimethyl Phthalate	100		2.0 U	2.0 U	2.0 U
di-n-Butyl Phthalate	700		2.0 U	2.0 U	2.0 U
di-n-Octyl Phthalate	100		2.0 U	2.0 U	2.0 U
Fluoranthene	300		0.234	0.1 U	0.1 U
Fluorene	300		8.3	0.1 U	1.16
Hexachlorobenzene	0.02		0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	1		1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	40		20 U	20 U	20 U
Hexachloroethane	7		5.0 U	5.1 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.1 U	0.1 U
Isophorone	40		2.0 U	2.0 U	2.0 U
Naphthalene	300		**5220 Y**	0.1 U	0.1 U
Nitrobenzene	6		2.0 U	2.0 U	2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.0 U	2.0 U
n-Nitrosodiphenylamine	10		**610 Y**	5.1 U	**28.5 Y**
Pentachlorophenol	0.3		0.3 U	0.3 U	0.3 U
Phenanthrene	100		1.98	0.1 U	0.1 U
Phenol	2000		53.3	2.0 U	2.0 U
Pyrene	200		0.222	0.1 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	38R 10/9/2009 ug/l	42R 10/9/2009 ug/l	AAA 10/9/2009 ug/l
1,2,4-Trichlorobenzene	9		**33.2 Y**	**10.9 J Y**	2.0 U
1,2-Dichlorobenzene	600		20.5	143	0.54 J
1,3-Dichlorobenzene	600		1.3 J	56.9	0.73 J
1,4-Dichlorobenzene	75		21.4	36.7 J	2.0 U
2,4,5-Trichlorophenol	700		5.0 U	100 U	5.0 U
2,4,6-Trichlorophenol	20		5.0 U	100 U	5.0 U
2,4-Dichlorophenol	20		5.0 U	100 U	5.0 U
2,4-Dimethylphenol	100		5.0 U	100 U	5.0 U
2,4-Dinitrophenol	40		20 U	400 U	20 U
2,4-Dinitrotoluene	10		2.0 U	40 U	2.0 U
2,6-Dinitrotoluene	10		2.0 U	40 U	2.0 U
2-Chloronaphthalene	600		2 J	100 U	5.0 U
2-Chlorophenol	40		5.0 U	100 U	5.0 U
2-Methylnaphthalene	100		22.6	40 U	2.0 U
2-Methylphenol	5		2.0 U	40 U	2.0 U
2-Nitroaniline	100		5.0 U	100 U	5.0 U
2-Nitrophenol	100		5.0 U	100 U	5.0 U
3 & 4-Methylphenol	5		2.0 U	40 U	2.0 U
3,3'-Dichlorobenzidine	30		5.0 U	100 U	5.0 U
3-Nitroaniline	100		5.0 U	100 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U	400 U	20 U
4-Bromophenyl Phenyl Ether	100		2.0 U	40 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U	100 U	5.0 U
4-Chloroaniline	30		5.2	100 U	0.6 J
4-Chlorophenyl Phenyl Ether	100		2.0 U	40 U	2.0 U
4-Nitroaniline	100		5.0 U	100 U	5.0 U
4-Nitrophenol	100		10 U	200 U	10 U
Acenaphthene	400		14.6	34.6	0.1 U
Acenaphthylene	100		0.1 U	2.0 U	0.1 U
Anthracene	2000		0.227	2.0 U	0.1 U
Benzo(a)Anthracene	0.1		0.1 U	2.0 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	2.0 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U	2.0 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	2.0 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U	2.0 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	40 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U	40 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	40 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	38R 10/9/2009 ug/l	42R 10/9/2009 ug/l	AAA 10/9/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		**3.1 Y**	40 U	2.0 U
Butyl Benzyl Phthalate	100		2.0 U	40 U	2.0 U
Carbazole	100		0.85 J	40 U	2.0 U
Chrysene	5		0.1 U	2.0 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	2.0 U	0.1 U
Dibenzofuran	100		12.7	20.4 J	5.0 U
Diethyl Phthalate	6000		2.0 U	40 U	2.0 U
Dimethyl Phthalate	100		2.0 U	40 U	2.0 U
di-n-Butyl Phthalate	700		2.0 U	40 U	2.0 U
di-n-Octyl Phthalate	100		2.0 U	40 U	2.0 U
Fluoranthene	300		0.1 U	2.0 U	0.1 U
Fluorene	300		3.85	2.82	0.1 U
Hexachlorobenzene	0.02		0.02 U	0.4 U	0.02 U
Hexachlorobutadiene	1		1.0 U	20 U	1.0 U
Hexachlorocyclopentadiene	40		20 U	400 U	20 U
Hexachloroethane	7		5.0 U	100 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	2.0 U	0.1 U
Isophorone	40		2.0 U	40 U	2.0 U
Naphthalene	300		**1040 Y**	15.3	0.1 U
Nitrobenzene	6		2.0 U	40 U	2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U	40 U	2.0 U
n-Nitrosodiphenylamine	10		**123 Y**	**77.2 J Y**	6.2
Pentachlorophenol	0.3		0.3 U	6.0 U	0.3 U
Phenanthrene	100		1.16	3.19	0.1 U
Phenol	2000		2.0 U	40 U	2.0 U
Pyrene	200		0.1 U	2.0 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	CCC-R 10/9/2009 ug/l	CCC-R DUP 10/9/2009 ug/l	EEE-R 10/9/2009 ug/l
1,2,4-Trichlorobenzene	9		2.0 U	2.0 U	2.1 U
1,2-Dichlorobenzene	600		2.0 U	2.0 U	2.1 U
1,3-Dichlorobenzene	600		2.0 U	2.0 U	2.1 U
1,4-Dichlorobenzene	75		2.0 U	2.0 U	2.1 U
2,4,5-Trichlorophenol	700		5.0 U	5.1 U	5.2 U
2,4,6-Trichlorophenol	20		5.0 U	5.1 U	5.2 U
2,4-Dichlorophenol	20		5.0 U	5.1 U	5.2 U
2,4-Dimethylphenol	100		5.0 U	5.1 U	5.2 U
2,4-Dinitrophenol	40		20 U	20 U	21 U
2,4-Dinitrotoluene	10		2.0 U	2.0 U	2.1 U
2,6-Dinitrotoluene	10		2.0 U	2.0 U	2.1 U
2-Chloronaphthalene	600		5.0 U	5.1 U	5.2 U
2-Chlorophenol	40		5.0 U	5.1 U	5.2 U
2-Methylnaphthalene	100		2.0 U	2.0 U	2.1 U
2-Methylphenol	5		2.0 U	2.0 U	2.1 U
2-Nitroaniline	100		5.0 U	5.1 U	5.2 U
2-Nitrophenol	100		5.0 U	5.1 U	5.2 U
3 & 4-Methylphenol	5		2.0 U	2.0 U	2.1 U
3,3'-Dichlorobenzidine	30		5.0 U	5.1 U	5.2 U
3-Nitroaniline	100		5.0 U	5.1 U	5.2 U
4,6-Dinitro-2-Methylphenol	100		20 U	20 U	21 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.0 U	2.1 U
4-chloro-3-Methyl Phenol	100		5.0 U	5.1 U	5.2 U
4-Chloroaniline	30		5.0 U	5.1 U	5.2 U
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.0 U	2.1 U
4-Nitroaniline	100		5.0 U	5.1 U	5.2 U
4-Nitrophenol	100		10 U	10 U	10 U
Acenaphthene	400		0.1 U	0.1 U	0.1 U
Acenaphthylene	100		0.1 U	0.1 U	0.1 U
Anthracene	2000		0.1 U	0.1 U	0.1 U
Benzo(a)Anthracene	0.1		0.1 U	0.1 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	0.1 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U	0.1 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	0.1 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U	0.1 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.0 U	2.1 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.0 U	2.1 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.0 U	2.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	CCC-R 10/9/2009 ug/l	CCC-R DUP 10/9/2009 ug/l	EEE-R 10/9/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U	2.0 U	2.1 U
Butyl Benzyl Phthalate	100		2.0 U	2.0 U	2.1 U
Carbazole	100		2.0 U	2.0 U	2.1 U
Chrysene	5		0.1 U	0.1 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.1 U	0.1 U
Dibenzofuran	100		5.0 U	5.1 U	5.2 U
Diethyl Phthalate	6000		2.0 U	2.0 U	2.1 U
Dimethyl Phthalate	100		2.0 U	2.0 U	2.1 U
di-n-Butyl Phthalate	700		2.0 U	2.0 U	2.1 U
di-n-Octyl Phthalate	100		2.0 U	2.0 U	2.1 U
Fluoranthene	300		0.1 U	0.1 U	0.1 U
Fluorene	300		0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.02		0.02 U	0.02 U	0.021 U
Hexachlorobutadiene	1		1.0 U	1.0 U	1 U
Hexachlorocyclopentadiene	40		20 U	20 U	21 U
Hexachloroethane	7		5.0 U	5.1 U	5.2 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.1 U	0.1 U
Isophorone	40		2.0 U	2.0 U	2.1 U
Naphthalene	300		0.1 U	0.1 U	0.1 U
Nitrobenzene	6		2.0 U	2.0 U	2.1 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.0 U	2.1 U
n-Nitrosodiphenylamine	10		5.0 U	5.1 U	5.2 U
Pentachlorophenol	0.3		0.3 U	0.3 U	0.31 U
Phenanthrene	100		0.1 U	0.1 U	0.1 U
Phenol	2000		2.0 U	2.0 U	2.1 U
Pyrene	200		0.1 U	0.1 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	III 10/9/2009 ug/l	KKK 10/9/2009 ug/l	MW-2 10/9/2009 ug/l
1,2,4-Trichlorobenzene	9		2.0 U	2.0 U	40 U
1,2-Dichlorobenzene	600		2.0 U	2.0 U	119
1,3-Dichlorobenzene	600		2.0 U	2.0 U	40 U
1,4-Dichlorobenzene	75		2.0 U	2.0 U	40 U
2,4,5-Trichlorophenol	700		5.1 U	5.0 U	100 U
2,4,6-Trichlorophenol	20		5.1 U	5.0 U	100 U
2,4-Dichlorophenol	20		5.1 U	5.0 U	100 U
2,4-Dimethylphenol	100		5.1 U	5.0 U	100 U
2,4-Dinitrophenol	40		20 U	20 U	400 U
2,4-Dinitrotoluene	10		2.0 U	2.0 U	40 U
2,6-Dinitrotoluene	10		2.0 U	2.0 U	40 U
2-Chloronaphthalene	600		5.1 U	5.0 U	100 U
2-Chlorophenol	40		5.1 U	5.0 U	100 U
2-Methylnaphthalene	100		2.0 U	2.0 U	**143 Y**
2-Methylphenol	5		2.0 U	2.0 U	40 U
2-Nitroaniline	100		5.1 U	5.0 U	100 U
2-Nitrophenol	100		5.1 U	5.0 U	100 U
3 & 4-Methylphenol	5		2.0 U	2.0 U	40 U
3,3'-Dichlorobenzidine	30		5.1 U	5.0 U	100 U
3-Nitroaniline	100		5.1 U	5.0 U	100 U
4,6-Dinitro-2-Methylphenol	100		20 U	20 U	400 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.0 U	40 U
4-chloro-3-Methyl Phenol	100		5.1 U	5.0 U	100 U
4-Chloroaniline	30		5.1 U	5.0 U	**119 Y**
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.0 U	40 U
4-Nitroaniline	100		5.1 U	5.0 U	100 U
4-Nitrophenol	100		10 U	10 U	200 U
Acenaphthene	400		0.1 U	0.1 U	28
Acenaphthylene	100		0.1 U	0.1 U	2.0 U
Anthracene	2000		0.1 U	0.1 U	2.76
Benzo(a)Anthracene	0.1		0.1 U	0.1 U	2.0 U
Benzo(a)Pyrene	0.1		0.1 U	0.1 U	2.0 U
Benzo(b)Fluoranthene.	0.2		0.1 U	0.1 U	2.0 U
Benzo(g,h,i)Perylene	100		0.1 U	0.1 U	2.0 U
Benzo(k)Fluoranthene	0.5		0.1 U	0.1 U	2.0 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.0 U	40 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.0 U	40 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.0 U	40 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID Sample Date Unit	III 10/9/2009 ug/l	KKK 10/9/2009 ug/l	MW-2 10/9/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U	2.0 U	**69.9 Y**
Butyl Benzyl Phthalate	100		2.0 U	2.0 U	40 U
Carbazole	100		2.0 U	2.0 U	40 U
Chrysene	5		0.1 U	0.1 U	2.0 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.1 U	2.0 U
Dibenzofuran	100		5.1 U	5.0 U	21.2 J
Diethyl Phthalate	6000		2.0 U	2.0 U	40 U
Dimethyl Phthalate	100		2.0 U	2.0 U	40 U
di-n-Butyl Phthalate	700		2.0 U	2.0 U	40 U
di-n-Octyl Phthalate	100		2.0 U	2.0 U	40 U
Fluoranthene	300		0.1 U	0.1 U	2.0 U
Fluorene	300		0.1 U	0.1 U	12.2
Hexachlorobenzene	0.02		0.02 U	0.02 U	0.4 U
Hexachlorobutadiene	1		1.0 U	1.0 U	20 U
Hexachlorocyclopentadiene	40		20 U	20 U	400 U
Hexachloroethane	7		5.1 U	5.0 U	100 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.1 U	2.0 U
Isophorone	40		2.0 U	2.0 U	40 U
Naphthalene	300		0.432	0.1 U	**1980 Y**
Nitrobenzene	6		2.0 U	2.0 U	40 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.0 U	40 U
n-Nitrosodiphenylamine	10		5.1 U	5.0 U	**236 Y**
Pentachlorophenol	0.3		0.31 U	0.3 U	6.0 U
Phenanthrene	100		0.1 U	0.1 U	4.5
Phenol	2000		2.0 U	2.0 U	40 U
Pyrene	200		0.1 U	0.1 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	PW-2 10/6/2009 ug/l	PW-3 10/6/2009 ug/l	TFP-94-1R 10/8/2009 ug/l
1,2,4-Trichlorobenzene	9		**130 Y**	**92.2 Y**	0.57 J
1,2-Dichlorobenzene	600		75.9	78.2	**1390 Y**
1,3-Dichlorobenzene	600		107	89.2	81.2
1,4-Dichlorobenzene	75		54.5	48	**411 Y**
2,4,5-Trichlorophenol	700		5.0 U	5.1 U	5.0 U
2,4,6-Trichlorophenol	20		5.0 U	5.1 U	5.0 U
2,4-Dichlorophenol	20		5.0 U	5.1 U	5.0 U
2,4-Dimethylphenol	100		5.0 U	5.1 U	4.1 J
2,4-Dinitrophenol	40		20 U	20 U	20 U
2,4-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	600		5.0 U	5.1 U	18.1
2-Chlorophenol	40		5.0 U	5.1 U	3.5 J
2-Methylnaphthalene	100		8.9	12.7	2.0 U
2-Methylphenol	5		2.0 U	2.0 U	**5.8 Y**
2-Nitroaniline	100		5.0 U	5.1 U	5.0 U
2-Nitrophenol	100		5.0 U	5.1 U	5.0 U
3 & 4-Methylphenol	5		2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	30		5.0 U	5.1 U	5.0 U
3-Nitroaniline	100		5.0 U	5.1 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U	20 U	20 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U	5.1 U	5.0 U
4-Chloroaniline	30		3.6 J	4.1 J	5.0 U
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-Nitroaniline	100		5.0 U	5.1 U	5.0 U
4-Nitrophenol	100		10 U	10 U	10 U
Acenaphthene	400		9.7	7.8	11.4
Acenaphthylene	100		0.752	0.56	2.33
Anthracene	2000		0.398	0.26	0.1 U
Benzo(a)Anthracene	0.1		0.1 U	0.1 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	0.1 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U	0.1 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	0.1 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U	0.1 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.0 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-6
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	PW-2 10/6/2009 ug/l	PW-3 10/6/2009 ug/l	TFP-94-1R 10/8/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U	2.0 U	2.0 U
Butyl Benzyl Phthalate	100		2.0 U	2.0 U	2.0 U
Carbazole	100		0.88 J	0.87 J	1.8 J
Chrysene	5		0.1 U	0.1 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.1 U	0.1 U
Dibenzofuran	100		2.8 J	2.7 J	5.8
Diethyl Phthalate	6000		2.0 U	2.0 U	2.0 U
Dimethyl Phthalate	100		2.0 U	2.0 U	2.0 U
di-n-Butyl Phthalate	700		2.0 U	2.0 U	2.0 U
di-n-Octyl Phthalate	100		2.0 U	2.0 U	2.0 U
Fluoranthene	300		0.129	0.1 U	0.1 U
Fluorene	300		2.32	1.79	2.5
Hexachlorobenzene	0.02		0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	1		1 U	1 U	1.0 U
Hexachlorocyclopentadiene	40		20 U	20 U	20 U
Hexachloroethane	7		5 U	5.1 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.1 U	0.1 U
Isophorone	40		2.0 U	2.0 U	2.0 U
Naphthalene	300		54.3	74.8	16.6
Nitrobenzene	6		1.5 J	**6.2 Y**	2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.0 U	2.0 U
n-Nitrosodiphenylamine	10		6.8	6.9	**78.5 Y**
Pentachlorophenol	0.3		0.3 U	0.3 U	0.3 U
Phenanthrene	100		0.539	0.627	1.16
Phenol	2000		2.0 U	2.0 U	2.0 U
Pyrene	200		0.1 U	0.1 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

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Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	16-MW-2 10/9/2009 ug/l	28R 10/8/2009 ug/l	34R 10/8/2009 ug/l
Aluminum	200		200 U	--	--
Antimony	6		6 U	--	--
Arsenic	3		**21.4 Y**	**29.8 Y**	**15 Y**
Barium	6000		200 U	--	--
Beryllium	1		1.0 U	--	--
Cadmium	4		3.0 U	3.0 U	--
Calcium	NA		21,800	--	--
Chromium	70		10 U	--	--
Cobalt	NA		50 U	--	--
Copper	1300		10 U	--	--
Iron	300		**40,400 Y**	--	--
Lead	5		3.0 U	--	--
Magnesium	NA		29,800	--	--
Manganese	50		**7,860 Y**	--	--
Mercury	2		0.2 U	--	--
Nickel	100		10 U	--	--
Potassium	NA		10,000 U	--	--
Selenium	40		10 U	--	--
Silver	40		10 U	--	--
Sodium	50000		19800	--	--
Thallium	2		2 U	--	--
Vanadium	NA		50 U	--	--
Zinc	2000		20 U	--	--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	38R 10/9/2009 ug/l	42R 10/9/2009 ug/l	AAA 10/9/2009 ug/l
Aluminum	200		--	--	200 U
Antimony	6		--	--	6 U
Arsenic	3		3.0 U	**16.6 Y**	**20.8 Y**
Barium	6000		--	--	200 U
Beryllium	1		--	--	1.0 U
Cadmium	4		3.0 U	--	3.0 U
Calcium	NA		--	--	21,700
Chromium	70		10 U	--	10 U
Cobalt	NA		--	--	50 U
Copper	1300		--	--	10 U
Iron	300		**--**	--	**58,300 Y**
Lead	5		--	--	3.0 U
Magnesium	NA		--	--	20,300
Manganese	50		--	--	**12,900 Y**
Mercury	2		--	--	0.2 U
Nickel	100		--	--	10 U
Potassium	NA		--	--	10,000 U
Selenium	40		--	--	10 U
Silver	40		--	--	10 U
Sodium	50000		--	--	23,700
Thallium	2		--	--	2 U
Vanadium	NA		--	--	50 U
Zinc	2000		--	--	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	CCC-R 10/9/2009 ug/l	CCC-R DUP 10/9/2009 ug/l	EEE-R 10/9/2009 ug/l
Aluminum	200		200 U	200 U	200 U
Antimony	6		6 U	6.0 U	6 U
Arsenic	3		**6.5 Y**	**5.7 Y**	**8.4 Y**
Barium	6000		200 U	200 U	200 U
Beryllium	1		1.0 U	1.0 U	1.0 U
Cadmium	4		3.0 U	3.0 U	3.0 U
Calcium	NA		83,400	80,500	43,700
Chromium	70		10 U	10 U	10 U
Cobalt	NA		50 U	50 U	50 U
Copper	1300		10 U	10 U	10 U
Iron	300		**2,060 Y**	**2,030 Y**	100 U
Lead	5		3.0 U	3.0 U	3.0 U
Magnesium	NA		65,200	63,200	67,800
Manganese	50		**6,320 Y**	**6,110 Y**	**2,560 Y**
Mercury	2		0.2 U	0.2 U	0.2 U
Nickel	100		10 U	10 U	10 U
Potassium	NA		10,000 U	10,000 U	10,000 U
Selenium	40		10 U	10 U	10 U
Silver	40		10 U	10 U	10 U
Sodium	50000		37,300	35,900	23,500
Thallium	2		2.0 U	2.0 U	2.0 U
Vanadium	NA		50 U	50 U	50 U
Zinc	2000		20 U	20 U	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

O'BRIEN & GERE ENGINEERS, INC.

Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	III 10/9/2009 ug/l	KKK 10/9/2009 ug/l	MW-2 10/9/2009 ug/l
Aluminum	200		200 U	200 U	--
Antimony	6		6 U	6.0 U	--
Arsenic	3		**6.5 Y**	3.0 U	**24.5 Y**
Barium	6000		200 U	200 U	--
Beryllium	1		1.0 U	1.0 U	--
Cadmium	4		3.0 U	3.0 U	3.0 U
Calcium	NA		33,100	21,700	--
Chromium	70		10 U	10 U	--
Cobalt	NA		50 U	50 U	--
Copper	1300		10 U	10 U	--
Iron	300		**22,400 Y**	**1,230 Y**	**--**
Lead	5		3.0 U	3.0 U	--
Magnesium	NA		12,600	12,200	--
Manganese	50		**8,170 Y**	**4,420 Y**	**--**
Mercury	2		0.2 U	0.2 U	--
Nickel	100		10 U	10 U	--
Potassium	NA		10,000 U	10,000 U	--
Selenium	40		10 U	10 U	--
Silver	40		10 U	10 U	--
Sodium	50000		**62,800 Y**	21,500	**--**
Thallium	2		2.0 U	2.0 U	--
Vanadium	NA		50 U	50 U	--
Zinc	2000		20 U	20 U	--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	PW-2 10/6/2009 ug/l	PW-3 10/6/2009 ug/l	SS P1 10/6/2009 ug/l
Aluminum	200		--	--	--
Antimony	6		--	--	--
Arsenic	3		3.0 U	3.0 U	**8.0 Y**
Barium	6000		--	--	--
Beryllium	1		--	--	--
Cadmium	4		--	--	--
Calcium	NA		--	--	--
Chromium	70		--	--	--
Cobalt	NA		--	--	--
Copper	1300		--	--	--
Iron	300		**--**	**--**	--
Lead	5		--	--	--
Magnesium	NA		--	--	--
Manganese	50		**--**	**--**	--
Mercury	2		--	--	--
Nickel	100		--	--	--
Potassium	NA		--	--	--
Selenium	40		--	--	--
Silver	40		--	--	--
Sodium	50000		--	--	--
Thallium	2		--	--	--
Vanadium	NA		--	--	--
Zinc	2000		--	--	--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

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Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	SS P2 10/6/2009 ug/l	SS P3 10/6/2009 ug/l	TFP-94-1R 10/8/2009 ug/l
Aluminum	200		--	--	--
Antimony	6		--	--	--
Arsenic	3		**9.3 Y**	**5.7 Y**	**87.3 Y**
Barium	6000		--	--	--
Beryllium	1		--	--	--
Cadmium	4		--	--	--
Calcium	NA		--	--	--
Chromium	70		--	--	--
Cobalt	NA		--	--	--
Copper	1300		--	--	--
Iron	300		--	--	--
Lead	5		--	--	--
Magnesium	NA		--	--	--
Manganese	50		--	--	--
Mercury	2		--	--	--
Nickel	100		--	--	--
Potassium	NA		--	--	--
Selenium	40		--	--	--
Silver	40		--	--	--
Sodium	50000		--	--	--
Thallium	2		--	--	--
Vanadium	NA		--	--	--
Zinc	2000		--	--	--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	TT P1 10/8/2009 ug/l	TT P2 10/8/2009 ug/l	TT P2 DUP 10/8/2009 ug/l
Aluminum	200		--	--	--
Antimony	6		--	--	--
Arsenic	3		3.0 U	3.0 U	3.0 U
Barium	6000		--	--	--
Beryllium	1		--	--	--
Cadmium	4		--	--	--
Calcium	NA		--	--	--
Chromium	70		--	--	--
Cobalt	NA		--	--	--
Copper	1300		--	--	--
Iron	300		--	--	--
Lead	5		--	--	--
Magnesium	NA		--	--	--
Manganese	50		--	--	--
Mercury	2		--	--	--
Nickel	100		--	--	--
Potassium	NA		--	--	--
Selenium	40		--	--	--
Silver	40		--	--	--
Sodium	50000		--	--	--
Thallium	2		--	--	--
Vanadium	NA		--	--	--
Zinc	2000		--	--	--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	TT P3 10/8/2009 ug/l	YY P1 10/6/2009 ug/l	YY P2 10/6/2009 ug/l
Aluminum	200		--	--	--
Antimony	6		--	--	--
Arsenic	3		3.0 U	**3.7 Y**	**7.2 Y**
Barium	6000		--	--	--
Beryllium	1		--	--	--
Cadmium	4		--	--	--
Calcium	NA		--	--	--
Chromium	70		--	--	--
Cobalt	NA		--	--	--
Copper	1300		--	--	--
Iron	300		--	--	--
Lead	5		--	--	--
Magnesium	NA		--	--	--
Manganese	50		--	--	--
Mercury	2		--	--	--
Nickel	100		--	--	--
Potassium	NA		--	--	--
Selenium	40		--	--	--
Silver	40		--	--	--
Sodium	50000		--	--	--
Thallium	2		--	--	--
Vanadium	NA		--	--	--
Zinc	2000		--	--	--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-7
Ground Water Analytical Results
Metals Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	YY P3 10/6/2009 ug/l
Aluminum	200		--
Antimony	6		--
Arsenic	3		3.0 U
Barium	6000		--
Beryllium	1		--
Cadmium	4		--
Calcium	NA		--
Chromium	70		--
Cobalt	NA		--
Copper	1300		--
Iron	300		--
Lead	5		--
Magnesium	NA		--
Manganese	50		--
Mercury	2		--
Nickel	100		--
Potassium	NA		--
Selenium	40		--
Silver	40		--
Sodium	50000		--
Thallium	2		--
Vanadium	NA		--
Zinc	2000		--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-8
Ground Water Analytical Results
Other Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	38R 10/9/2009 ug/l	AAA 10/9/2009 ug/l	CCC-R 10/9/2009 ug/l
Chloride	250000		29100	61200	29800
Cyanide	100		--	10 U	16
Phenols	2000		--	200 U	200 U
Gross Alpha	15	pci/l	--	--	6.05
Gross Beta	50	pci/l	--	--	2.45
Radium 226 / 228 Combined	5	pci/l	--	--	**24.5 Y**

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 3-8
Ground Water Analytical Results
Other Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	CCC-R DUP 10/9/2009 ug/l	EEE-R 10/9/2009 ug/l	III 10/9/2009 ug/l
Chloride	250000		29700	39200	132000
Cyanide	100		15	12	--
Phenols	2000		200 U	200 U	--
Gross Alpha	15	pci/l	2.4	3.74	--
Gross Beta	50	pci/l	6.6	2.64	--
Radium 226 / 228 Combined	5	pci/l	**45.1 Y**	**33.6 Y**	**--**

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

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Table 3-8
Ground Water Analytical Results
Other Data
2009 Second Half Site Wide Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	KKK 10/9/2009 ug/l	MW-2 10/9/2009 ug/l
Chloride	250000	--	47500	186000
Cyanide	100	--	--	--
Phenols	2000	--	--	--
Gross Alpha	15	pci/l	0.538	--
Gross Beta	50	pci/l	1.96	--
Radium 226 / 228 Combined	5	pci/l	**9.06 Y**	--

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Wyeth Holdings Corporation
Bound Brook, New Jersey Site
Second Half 2009 Impound 8 Facility Ground Water Program

Table 4-1. *Impound 8: Overburden and Shallow Bedrock Ground Water Elevations - October 5, 2009*

Well Number	Permit Number	Casing Elevation (ft msl)	Well Depth (ft BTOC)	Bottom of Well Elevation (ft msl)	Screened Interval Elevation (ft msl) Top	Bottom	Depth to Water (ft BTOC)	2009 First Semi-Annual Ground Water Elevation (ft msl)	2009 Second Semi-Annual Ground Water Elevation (ft msl)	Ground Water Elevation Change (ft)	Ground Water Detection Monitoring Program Hydraulic Designations	Designations Based on Observed December 2009 Semi-annual Ground WaterFlow Conditions
Overburden Wells												
RCRA S-1	25-35748-4	68.38	17.3	51.1	61.1	51.1	14.59	57.80	53.79	-4.01	Upgradient	Upgradient
RCRA S-2	25-35749-2	61.21	19.4	41.8	51.8	41.8	Dry	Dry	Dry	Dry	Downgradient	Downgradient
RCRA S-3	25-35750-6	61.07	22.5	38.6	48.6	38.6	18.20	43.15	42.87	-0.28	Upgradient	Upgradient
RCRA S-4	2535753-1	57.68	21.0	36.7	46.7	36.7	20.79	36.86	36.89	0.03	Upgradient	Upgradient
RCRA S-5	25-35752-2	57.97	15.2	42.8	47.8	42.8	Dry	Dry	Dry	Dry	Downgradient	Downgradient
RCRA S-6	25-35751-4	52.44	9.8	42.6	45.6	42.6	Dry	Dry	Dry	Dry	Downgradient	Downgradient
RCRA S-7	25-35759-0	52.41	24.0	28.4	38.4	28.4	17.41	35.25	35.00	-0.25	Downgradient	Downgradient
RCRA S-8	25-35757-3	68.09	27.9	40.2	50.2	40.2	26.08	41.91	42.01	0.10	Downgradient	Downgradient
RCRA S-9	25-35756-5	63.81	23.3	40.5	51.5	40.5	14.61	49.33	49.20	-0.13	Upgradient	Upgradient
RCRA S-10	25-35755-7	69.25	12.5	56.8	61.8	56.8	11.89	56.91	57.36	0.45	Downgradient	Downgradient
RCRA S-11	25-35758-1	69.29	11.6	57.7	62.7	57.7	7.40	64.39	61.89	-2.50	Upgradient	Upgradient
RCRA S-12	25-35754-9	69.68	11.6	58.1	63.1	58.1	Dry	58.16	Dry	Dry	Downgradient	Downgradient
RCRA S-13R	25-43417	67.11	19.3	47.8	NA	47.8	Dry	Dry	Dry	Dry	Downgradient	Downgradient
RCRA S-14	25-43418	66.72	30.2	36.5	NA	36.5	28.02	38.49	38.70	0.21	Downgradient	Downgradient
RCRA S-15	25-43419	54.33	25.2	29.1	NA	29.1	20.28	34.19	34.05	-0.14	Downgradient	Downgradient
Shallow Bedrock Wells												
RCRA D-1*	25-35765-4	64.79	71.7	-6.9	44.0	-6.9	39.70	27.35	25.09	-2.26	Downgradient/North	Upgradient/North
RCRA D-2*	25-35764-6	62.96	81.4	-18.4	42.2	-18.4	37.69	27.43	25.27	-2.16	Downgradient/North	Upgradient/North
RCRA D-3*	25-35763-8	61.67	75.7	-14.0	40.9	-14.0	35.55	27.55	26.12	-1.43	Downgradient/North	Upgradient/North
RCRA D-4*	25-35762-0	61.37	83.8	-22.4	35.6	-22.4	34.80	27.68	26.57	-1.11	Downgradient/North	Upgradient/North
RCRA D-5*	25-35752-2	59.09	59.3	-0.2	37.1	-0.2	34.81	25.24	24.28	-0.96	Upgradient	Downgradient
RCRA D-6*	25-35751-4	53.36	58.7	-5.3	32.9	-5.3	31.09	23.49	22.27	-1.22	Upgradient	Downgradient
RCRA D-7*	25-35759-0	52.16	66.2	-14.0	14.7	-14.0	29.37	23.58	22.79	-0.79	Downgradient/South	Downgradient
RCRA D-8*	25-35760-3	52.83	62.9	-10.1	10.8	-10.1	32.19	21.64	20.64	-1.00	Downgradient/South	Downgradient
RCRA D-9*	25-35747-6	56.51	87.7	-31.2	27.5	-31.2	23.69	32.35	32.82	0.47	Downgradient/South	Downgradient
RCRA D-10*	25-357-55-7	59.71	72.4	-12.7	44.7	-12.7	37.55	23.19	22.16	-1.03	Downgradient/South	Downgradient
RCRA D-11*	25-35758-1	66.59	89.8	-23.2	28.6	-23.2	44.92	22.77	21.67	-1.10	Downgradient/South	Downgradient
RCRA D-12*	25-35745-0	69.50	77.1	-7.6	7.4	-7.6	45.62	24.71	23.88	-0.83	Downgradient Lagoon 9a Upgradient Imp 8	Downgradient Lagoon 9a Downgradient Imp 8
RCRA D-13*	25-35746-8	70.68	85.9	-15.2	42.9	-15.2	47.05	25.37	23.63	-1.74	Downgradient Lagoon 9a Upgradient Imp 8	Downgradient Lagoon 9a Downgradient Imp 8
RCRA D-14*	25-35742-5	69.68	80.5	-10.8	44.6	-10.8	42.25	28.27	27.43	-0.84	Upgradient/Lagoon 9a & Imp 8	Upgradient/Lagoon 9a & Imp 8
RCRA D-15*	25-35743-3	66.19	83.9	-17.7	5.8	-17.7	41.79	25.30	24.40	-0.90	Upgradient/Lagoon 9a & Imp 8	Upgradient/Lagoon 9a & Imp 8
8 D-8*	25-29745-7	51.74	72.4	-20.7	39.2	-20.7	29.93	23.48	21.81	-1.67	Downgradient	Downgradient

Notes: ft BTOC - feet below top of casing
ft msl - feet mean sea level
* denotes open bedrock well

O'BRIEN & GERE ENGINEERS, INC.

Table 4-2
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D1 10/6/2009 ug/l	RCRA-D2 10/7/2009 ug/l	RCRA-D3 10/7/2009 ug/l
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

O'BRIEN & GERE ENGINEERS, INC.

Table 4-2
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D4 10/7/2009 ug/l	RCRA-D5 10/7/2009 ug/l	RCRA-D6 10/7/2009 ug/l
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	0.38 J
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-2
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D7 10/7/2009 ug/l	RCRA-D8 10/8/2009 ug/l	RCRA-D8 DUP 10/8/2009 ug/l
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	0.3 J	0.3 J
1,1-Dichloroethene	1		1.0 U	**1.2 Y**	**1.1 Y**
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	0.24 J
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	0.55 J	0.52 J
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	0.3 J	0.26 J
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-2
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D9 10/8/2009 ug/l	RCRA-D10 10/8/2009 ug/l	RCRA-D11 10/6/2009 ug/l
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	0.36 J	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	0.47 J
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-2
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D12 10/6/2009 ug/l	RCRA-D13 10/6/2009 ug/l	RCRA-D14 10/6/2009 ug/l
1,1,1-Trichloroethane	30		1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	1		1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	3		1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	50		0.35 J	1.0 U	1.0 U
1,1-Dichloroethene	1		1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	2		1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	1		1.0 U	1.0 U	1.0 U
2-Butanone (Mek)	300		10 U	10 U	10 U
2-Hexanone	100		5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U	5.0 U	5.0 U
Acetone	6000		10 U	10 U	10 U
Benzene	1		1.0 U	1.0 U	1.0 U
Bromodichloromethane	1		1.0 U	1.0 U	1.0 U
Bromoform	4		4.0 U	4.0 U	4.0 U
Bromomethane	10		2.0 U	2.0 U	2.0 U
Carbon Disulfide	700		2.0 U	2.0 U	2.0 U
Carbon Tetrachloride	1		1.0 U	1.0 U	1.0 U
Chlorobenzene	50		1.0 U	1.0 U	1.0 U
Chloroethane	100		1.0 U	1.0 U	1.0 U
Chloroform	70		1.0 U	1.0 U	1.0 U
Chloromethane	100		1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	70		1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Dibromochloromethane	1		1.0 U	1.0 U	1.0 U
Ethylbenzene	700		1.0 U	1.0 U	1.0 U
Methylene Chloride	3		2.0 U	2.0 U	2.0 U
Styrene (Monomer)	100		5.0 U	5.0 U	5.0 U
Tetrachloroethene	1		1.0 U	1.0 U	1.0 U
Toluene	600		1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	100		1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropylene	1		1.0 U	1.0 U	1.0 U
Trichloroethene	1		1.0 U	1.0 U	1.0 U
Vinyl Chloride	1		1.0 U	1.0 U	1.0 U
Xylenes (Total)	1000		1.0 U	1.0 U	1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-2
Ground Water Analytical Results
8260 Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D15 / 10/6/2009 / ug/l
1,1,1-Trichloroethane	30		1.8
1,1,2,2-Tetrachloroethane	1		1.0 U
1,1,2-Trichloroethane	3		1.0 U
1,1-Dichloroethane	50		1.7
1,1-Dichloroethene	1		**7.4 Y**
1,2-Dichloroethane	2		1.0 U
1,2-Dichloropropane	1		1.0 U
2-Butanone (Mek)	300		10 U
2-Hexanone	100		5.0 U
4-Methyl-2-Pentanone (Mibk)	100		5.0 U
Acetone	6000		10 U
Benzene	1		1.0 U
Bromodichloromethane	1		1.0 U
Bromoform	4		4.0 U
Bromomethane	10		2.0 U
Carbon Disulfide	700		2.0 U
Carbon Tetrachloride	1		**15.7 Y**
Chlorobenzene	50		0.8 J
Chloroethane	100		1.0 U
Chloroform	70		3.3
Chloromethane	100		1.0 U
cis-1,2-Dichloroethene	70		4.2
cis-1,3-Dichloropropylene	1		1.0 U
Dibromochloromethane	1		1.0 U
Ethylbenzene	700		1.0 U
Methylene Chloride	3		2.0 U
Styrene (Monomer)	100		5.0 U
Tetrachloroethene	1		**26.8 Y**
Toluene	600		1.0 U
trans-1,2-Dichloroethene	100		1.0 U
trans-1,3-Dichloropropylene	1		1.0 U
Trichloroethene	1		**7.5 Y**
Vinyl Chloride	1		1.0 U
Xylenes (Total)	1000		1.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D1 10/6/2009 ug/l	RCRA-D2 10/7/2009 ug/l	RCRA-D3 10/7/2009 ug/l
1,2,4-Trichlorobenzene	9		2.2 U	2.0 U	2.0 U
1,2-Dichlorobenzene	600		2.2 U	2.0 U	2.0 U
1,3-Dichlorobenzene	600		2.2 U	2.0 U	2.0 U
1,4-Dichlorobenzene	75		2.2 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	700		5.4 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	20		5.4 U	5.0 U	5.0 U
2,4-Dichlorophenol	20		5.4 U	5.0 U	5.0 U
2,4-Dimethylphenol	100		5.4 U	5.0 U	5.0 U
2,4-Dinitrophenol	40		22 U	20 U	20 U
2,4-Dinitrotoluene	10		2.2 U	2.0 U	2.0 U
2,6-Dinitrotoluene	10		2.2 U	2.0 U	2.0 U
2-Chloronaphthalene	600		5.4 U	5.0 U	5.0 U
2-Chlorophenol	40		5.4 U	5.0 U	5.0 U
2-Methylnaphthalene	100		2.2 U	2.0 U	15.9
2-Methylphenol	5		2.2 U	2.0 U	2.0 U
2-Nitroaniline	100		5.4 U	5.0 U	5.0 U
2-Nitrophenol	100		5.4 U	5.0 U	5.0 U
3 & 4-Methylphenol	5		2.2 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	30		5.4 U	5.0 U	5.0 U
3-Nitroaniline	100		5.4 U	5.0 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		22 U	20 U	20 U
4-Bromophenyl Phenyl Ether	100		2.2 U	2.0 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.4 U	5.0 U	5.0 U
4-Chloroaniline	30		5.4 U	5.0 U	5.0 U
4-Chlorophenyl Phenyl Ether	100		2.2 U	2.0 U	2.0 U
4-Nitroaniline	100		5.4 U	5.0 U	5.0 U
4-Nitrophenol	100		11 U	10 U	10 U
Acenaphthene	400		0.11 U	0.1 U	2.38
Acenaphthylene	100		0.11 U	0.1 U	0.1 U
Anthracene	2000		0.11 U	0.1 U	1.29
Benzo(a)Anthracene	0.1		0.11 U	0.1 U	**0.357 Y**
Benzo(a)Pyrene	0.1		0.11 U	0.1 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.11 U	0.1 U	0.1 U
Benzo(g,h,i)Perylene	100		0.11 U	0.1 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.11 U	0.1 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.2 U	2.0 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.2 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.2 U	2.0 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D1 10/6/2009 ug/l	RCRA-D2 10/7/2009 ug/l	RCRA-D3 10/7/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.2 U	2.0 U	2.0 U
Butyl Benzyl Phthalate	100		2.2 U	2.0 U	2.0 U
Carbazole	100		2.2 U	2.0 U	2.0 U
Chrysene	5		0.11 U	0.1 U	0.174
Dibenzo(a,h)Anthracene	0.3		0.11 U	0.1 U	0.1 U
Dibenzofuran	100		5.4 U	5.0 U	5.0 U
Diethyl Phthalate	6000		2.2 U	2.0 U	2.0 U
Dimethyl Phthalate	100		2.2 U	2.0 U	2.0 U
di-n-Butyl Phthalate	700		2.2 U	2.0 U	2.0 U
di-n-Octyl Phthalate	100		2.2 U	2.0 U	2.0 U
Fluoranthene	300		0.11 U	0.1 U	0.349
Fluorene	300		0.11 U	0.1 U	1.7
Hexachlorobenzene	0.02		0.022 U	0.02 U	0.02 U
Hexachlorobutadiene	1		1.1 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	40		22 U	20 U	20 U
Hexachloroethane	7		5.4 U	5.0 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.11 U	0.1 U	0.1 U
Isophorone	40		2.2 U	2.0 U	2.0 U
Naphthalene	300		0.11 U	0.1 U	2.54
Nitrobenzene	6		2.2 U	2.0 U	2.0 U
n-Nitroso-di-n-Propylamine	10		2.2 U	2.0 U	2.0 U
n-Nitrosodiphenylamine	10		5.4 U	5.0 U	5.0 U
Pentachlorophenol	0.3		0.32 U	0.3 U	0.3 U
Phenanthrene	100		0.11 U	0.1 U	4.11
Phenol	2000		2.2 U	2.0 U	2.0 U
Pyrene	200		0.11 U	0.1 U	0.733

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D4 10/7/2009 ug/l	RCRA-D5 10/7/2009 ug/l	RCRA-D6 10/7/2009 ug/l
1,2,4-Trichlorobenzene	9		2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	600		2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	600		2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	75		2.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	700		5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	20		5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	20		5.0 U	5.0 U	5.0 U
2,4-Dimethylphenol	100		5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	40		20 U	20 U	20 U
2,4-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	600		5.0 U	5.0 U	5.0 U
2-Chlorophenol	40		5.0 U	5.0 U	5.0 U
2-Methylnaphthalene	100		2.0 U	2.0 U	2.0 U
2-Methylphenol	5		2.0 U	2.0 U	2.0 U
2-Nitroaniline	100		5.0 U	5.0 U	5.0 U
2-Nitrophenol	100		5.0 U	5.0 U	5.0 U
3 & 4-Methylphenol	5		2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	30		5.0 U	5.0 U	5.0 U
3-Nitroaniline	100		5.0 U	5.0 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U	20 U	20 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U	5.0 U	5.0 U
4-Chloroaniline	30		5.0 U	5.0 U	5.0 U
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-Nitroaniline	100		5.0 U	5.0 U	5.0 U
4-Nitrophenol	100		10 U	10 U	10 U
Acenaphthene	400		0.1 U	0.1 U	0.1 U
Acenaphthylene	100		0.1 U	0.1 U	0.1 U
Anthracene	2000		0.1 U	0.1 U	0.1 U
Benzo(a)Anthracene	0.1		0.1 U	0.1 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	0.1 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U	0.1 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	0.1 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U	0.1 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.0 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D4 10/7/2009 ug/l	RCRA-D5 10/7/2009 ug/l	RCRA-D6 10/7/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U	2.0 U	2.0 U
Butyl Benzyl Phthalate	100		2.0 U	2.0 U	2.0 U
Carbazole	100		2.0 U	2.0 U	2.0 U
Chrysene	5		0.1 U	0.1 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.1 U	0.1 U
Dibenzofuran	100		5.0 U	5.0 U	5.0 U
Diethyl Phthalate	6000		2.0 U	2.0 U	2.0 U
Dimethyl Phthalate	100		2.0 U	2.0 U	2.0 U
di-n-Butyl Phthalate	700		2.0 U	2.0 U	2.0 U
di-n-Octyl Phthalate	100		2.0 U	2.0 U	2.0 U
Fluoranthene	300		0.1 U	0.1 U	0.1 U
Fluorene	300		0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.02		0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	1		1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	40		20 U	20 U	20 U
Hexachloroethane	7		5.0 U	5.0 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.1 U	0.1 U
Isophorone	40		2.0 U	2.0 U	2.0 U
Naphthalene	300		0.1 U	0.1 U	0.1 U
Nitrobenzene	6		2.0 U	2.0 U	2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.0 U	2.0 U
n-Nitrosodiphenylamine	10		5.0 U	5.0 U	5.0 U
Pentachlorophenol	0.3		0.3 U	0.3 U	0.3 U
Phenanthrene	100		0.1 U	0.1 U	0.1 U
Phenol	2000		2.0 U	2.0 U	2.0 U
Pyrene	200		0.1 U	0.1 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D7 10/7/2009 ug/l	RCRA-D8 10/8/2009 ug/l	RCRA-D8 DUP 10/8/2009 ug/l
1,2,4-Trichlorobenzene	9		2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	600		2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	600		2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	75		2.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	700		5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	20		5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	20		5.0 U	5.0 U	5.0 U
2,4-Dimethylphenol	100		5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	40		20 U	20 U	20 U
2,4-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	600		5.0 U	5.0 U	5.0 U
2-Chlorophenol	40		5.0 U	5.0 U	5.0 U
2-Methylnaphthalene	100		2.0 U	2.0 U	2.0 U
2-Methylphenol	5		2.0 U	2.0 U	2.0 U
2-Nitroaniline	100		5.0 U	5.0 U	5.0 U
2-Nitrophenol	100		5.0 U	5.0 U	5.0 U
3 & 4-Methylphenol	5		2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	30		5.0 U	5.0 U	5.0 U
3-Nitroaniline	100		5.0 U	5.0 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U	20 U	20 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U	5.0 U	5.0 U
4-Chloroaniline	30		5.0 U	5.0 U	5.0 U
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-Nitroaniline	100		5.0 U	5.0 U	5.0 U
4-Nitrophenol	100		10 U	10 U	10 U
Acenaphthene	400		0.1 U	0.1 U	0.1 U
Acenaphthylene	100		0.1 U	0.1 U	0.1 U
Anthracene	2000		0.1 U	0.1 U	0.1 U
Benzo(a)Anthracene	0.1		0.1 U	0.1 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	0.1 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U	0.1 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	0.1 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U	0.1 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.0 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D7 10/7/2009 ug/l	RCRA-D8 10/8/2009 ug/l	RCRA-D8 DUP 10/8/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U	2.0 U	2.0 U
Butyl Benzyl Phthalate	100		2.0 U	2.0 U	2.0 U
Carbazole	100		2.0 U	2.0 U	2.0 U
Chrysene	5		0.1 U	0.1 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.1 U	0.1 U
Dibenzofuran	100		5.0 U	5.0 U	5.0 U
Diethyl Phthalate	6000		2.0 U	2.0 U	2.0 U
Dimethyl Phthalate	100		2.0 U	2.0 U	2.0 U
di-n-Butyl Phthalate	700		2.0 U	2.0 U	2.0 U
di-n-Octyl Phthalate	100		2.0 U	2.0 U	2.0 U
Fluoranthene	300		0.1 U	0.1 U	0.1 U
Fluorene	300		0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.02		0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	1		1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	40		20 U	20 U	20 U
Hexachloroethane	7		5.0 U	5.0 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.1 U	0.1 U
Isophorone	40		2.0 U	2.0 U	2.0 U
Naphthalene	300		0.1 U	0.1 U	0.1 U
Nitrobenzene	6		2.0 U	2.0 U	2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.0 U	2.0 U
n-Nitrosodiphenylamine	10		5.0 U	5.0 U	5.0 U
Pentachlorophenol	0.3		0.3 U	0.3 U	0.3 U
Phenanthrene	100		0.1 U	0.1 U	0.1 U
Phenol	2000		2.0 U	2.0 U	2.0 U
Pyrene	200		0.1 U	0.1 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D9 10/8/2009 ug/l	RCRA-D10 10/8/2009 ug/l	RCRA-D11 10/6/2009 ug/l
1,2,4-Trichlorobenzene	9		2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	600		2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	600		2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	75		2.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol	700		5.0 U	5.0 U	5.0 U
2,4,6-Trichlorophenol	20		5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol	20		5.0 U	5.0 U	5.0 U
2,4-Dimethylphenol	100		5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	40		20 U	20 U	20 U
2,4-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	10		2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	600		5.0 U	5.0 U	5.0 U
2-Chlorophenol	40		5.0 U	5.0 U	5.0 U
2-Methylnaphthalene	100		2.0 U	2.0 U	2.0 U
2-Methylphenol	5		2.0 U	2.0 U	2.0 U
2-Nitroaniline	100		5.0 U	5.0 U	5.0 U
2-Nitrophenol	100		5.0 U	5.0 U	5.0 U
3 & 4-Methylphenol	5		2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	30		5.0 U	5.0 U	5.0 U
3-Nitroaniline	100		5.0 U	5.0 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U	20 U	20 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U	5.0 U	5.0 U
4-Chloroaniline	30		5.0 U	5.0 U	5.0 U
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.0 U	2.0 U
4-Nitroaniline	100		5.0 U	5.0 U	5.0 U
4-Nitrophenol	100		10 U	10 U	10 U
Acenaphthene	400		0.1 U	0.1 U	0.1 U
Acenaphthylene	100		0.1 U	0.1 U	0.1 U
Anthracene	2000		0.1 U	0.1 U	0.1 U
Benzo(a)Anthracene	0.1		0.1 U	0.1 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	0.1 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U	0.1 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	0.1 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U	0.1 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.0 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.0 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.0 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D9 10/8/2009 ug/l	RCRA-D10 10/8/2009 ug/l	RCRA-D11 10/6/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U	2.0 U	2.0 U
Butyl Benzyl Phthalate	100		2.0 U	2.0 U	2.0 U
Carbazole	100		2.0 U	2.0 U	2.0 U
Chrysene	5		0.1 U	0.1 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.1 U	0.1 U
Dibenzofuran	100		5.0 U	5.0 U	5.0 U
Diethyl Phthalate	6000		2.0 U	2.0 U	2.0 U
Dimethyl Phthalate	100		2.0 U	2.0 U	2.0 U
di-n-Butyl Phthalate	700		2.0 U	2.0 U	2.0 U
di-n-Octyl Phthalate	100		2.0 U	2.0 U	2.0 U
Fluoranthene	300		0.1 U	0.1 U	0.1 U
Fluorene	300		0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.02		0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	1		1.0 U	1.0 U	1.0 U
Hexachlorocyclopentadiene	40		20 U	20 U	20 U
Hexachloroethane	7		5.0 U	5.0 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.1 U	0.1 U
Isophorone	40		2.0 U	2.0 U	2.0 U
Naphthalene	300		0.1 U	0.1 U	0.1 U
Nitrobenzene	6		2.0 U	2.0 U	2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.0 U	2.0 U
n-Nitrosodiphenylamine	10		5.0 U	5.0 U	5.0 U
Pentachlorophenol	0.3		0.3 U	0.3 U	0.3 U
Phenanthrene	100		0.1 U	0.1 U	0.1 U
Phenol	2000		2.0 U	2.0 U	2.0 U
Pyrene	200		0.1 U	0.1 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D12 10/6/2009 ug/l	RCRA-D13 10/6/2009 ug/l	RCRA-D14 10/6/2009 ug/l
1,2,4-Trichlorobenzene	9		2.0 U	2.2 U	2.0 U
1,2-Dichlorobenzene	600		2.0 U	2.2 U	2.0 U
1,3-Dichlorobenzene	600		2.0 U	2.2 U	2.0 U
1,4-Dichlorobenzene	75		2.0 U	2.2 U	2.0 U
2,4,5-Trichlorophenol	700		5.0 U	5.4 U	5.0 U
2,4,6-Trichlorophenol	20		5.0 U	5.4 U	5.0 U
2,4-Dichlorophenol	20		5.0 U	5.4 U	5.0 U
2,4-Dimethylphenol	100		5.0 U	5.4 U	5.0 U
2,4-Dinitrophenol	40		20 U	22 U	20 U
2,4-Dinitrotoluene	10		2.0 U	2.2 U	2.0 U
2,6-Dinitrotoluene	10		2.0 U	2.2 U	2.0 U
2-Chloronaphthalene	600		5.0 U	5.4 U	5.0 U
2-Chlorophenol	40		5.0 U	5.4 U	5.0 U
2-Methylnaphthalene	100		2.0 U	2.2 U	2.0 U
2-Methylphenol	5		2.0 U	2.2 U	2.0 U
2-Nitroaniline	100		5.0 U	5.4 U	5.0 U
2-Nitrophenol	100		5.0 U	5.4 U	5.0 U
3 & 4-Methylphenol	5		2.0 U	2.2 U	2.0 U
3,3'-Dichlorobenzidine	30		5.0 U	5.4 U	5.0 U
3-Nitroaniline	100		5.0 U	5.4 U	5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U	22 U	20 U
4-Bromophenyl Phenyl Ether	100		2.0 U	2.2 U	2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U	5.4 U	5.0 U
4-Chloroaniline	30		5.0 U	5.4 U	5.0 U
4-Chlorophenyl Phenyl Ether	100		2.0 U	2.2 U	2.0 U
4-Nitroaniline	100		5.0 U	5.4 U	5.0 U
4-Nitrophenol	100		10 U	11 U	10 U
Acenaphthene	400		0.1 U	0.11 U	0.1 U
Acenaphthylene	100		0.1 U	0.11 U	0.1 U
Anthracene	2000		0.1 U	0.11 U	0.1 U
Benzo(a)Anthracene	0.1		0.1 U	0.11 U	0.1 U
Benzo(a)Pyrene	0.1		0.1 U	0.11 U	0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U	0.11 U	0.1 U
Benzo(g,h,i)Perylene	100		0.1 U	0.11 U	0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U	0.11 U	0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U	2.2 U	2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U	2.2 U	2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U	2.2 U	2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D12 10/6/2009 ug/l	RCRA-D13 10/6/2009 ug/l	RCRA-D14 10/6/2009 ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U	2.2 U	2.0 U
Butyl Benzyl Phthalate	100		2.0 U	2.2 U	2.0 U
Carbazole	100		2.0 U	2.2 U	2.0 U
Chrysene	5		0.1 U	0.11 U	0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U	0.11 U	0.1 U
Dibenzofuran	100		5.0 U	5.4 U	5.0 U
Diethyl Phthalate	6000		2.0 U	2.2 U	2.0 U
Dimethyl Phthalate	100		2.0 U	2.2 U	2.0 U
di-n-Butyl Phthalate	700		2.0 U	2.2 U	2.0 U
di-n-Octyl Phthalate	100		2.0 U	2.2 U	2.0 U
Fluoranthene	300		0.1 U	0.11 U	0.1 U
Fluorene	300		0.1 U	0.11 U	0.1 U
Hexachlorobenzene	0.02		0.02 U	0.022 U	0.02 U
Hexachlorobutadiene	1		1.0 U	1.1 U	1.0 U
Hexachlorocyclopentadiene	40		20 U	22 U	20 U
Hexachloroethane	7		5.0 U	5.4 U	5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U	0.11 U	0.1 U
Isophorone	40		2.0 U	2.2 U	2.0 U
Naphthalene	300		0.1 U	0.11 U	0.1 U
Nitrobenzene	6		2.0 U	2.2 U	2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U	2.2 U	2.0 U
n-Nitrosodiphenylamine	10		5.0 U	5.4 U	5.0 U
Pentachlorophenol	0.3		0.3 U	0.33 U	0.3 U
Phenanthrene	100		0.1 U	0.11 U	0.1 U
Phenol	2000		2.0 U	2.2 U	2.0 U
Pyrene	200		0.1 U	0.11 U	0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D15 / 10/6/2009 / ug/l
1,2,4-Trichlorobenzene	9		2.0 U
1,2-Dichlorobenzene	600		2.0 U
1,3-Dichlorobenzene	600		2.0 U
1,4-Dichlorobenzene	75		2.0 U
2,4,5-Trichlorophenol	700		5.0 U
2,4,6-Trichlorophenol	20		5.0 U
2,4-Dichlorophenol	20		5.0 U
2,4-Dimethylphenol	100		5.0 U
2,4-Dinitrophenol	40		20 U
2,4-Dinitrotoluene	10		2.0 U
2,6-Dinitrotoluene	10		2.0 U
2-Chloronaphthalene	600		5.0 U
2-Chlorophenol	40		5.0 U
2-Methylnaphthalene	100		2.0 U
2-Methylphenol	5		2.0 U
2-Nitroaniline	100		5.0 U
2-Nitrophenol	100		5.0 U
3 & 4-Methylphenol	5		2.0 U
3,3'-Dichlorobenzidine	30		5.0 U
3-Nitroaniline	100		5.0 U
4,6-Dinitro-2-Methylphenol	100		20 U
4-Bromophenyl Phenyl Ether	100		2.0 U
4-chloro-3-Methyl Phenol	100		5.0 U
4-Chloroaniline	30		5.0 U
4-Chlorophenyl Phenyl Ether	100		2.0 U
4-Nitroaniline	100		5.0 U
4-Nitrophenol	100		10 U
Acenaphthene	400		0.1 U
Acenaphthylene	100		0.1 U
Anthracene	2000		0.1 U
Benzo(a)Anthracene	0.1		0.1 U
Benzo(a)Pyrene	0.1		0.1 U
Benzo(b)Fluoranthene.	0.2		0.1 U
Benzo(g,h,i)Perylene	100		0.1 U
Benzo(k)Fluoranthene	0.5		0.1 U
bis(2-Chloroethoxy)Methane	100		2.0 U
bis(2-Chloroethyl)Ether	7		2.0 U
bis(2-Chloroisopropyl)Ether	300		2.0 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

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Table 4-3
Ground Water Analytical Results
8270 Semi Volatile Organic Compound Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D15 / 10/6/2009 / ug/l
bis(2-Ethylhexyl)Phthalate	3		2.0 U
Butyl Benzyl Phthalate	100		2.0 U
Carbazole	100		2.0 U
Chrysene	5		0.1 U
Dibenzo(a,h)Anthracene	0.3		0.1 U
Dibenzofuran	100		5.0 U
Diethyl Phthalate	6000		2.0 U
Dimethyl Phthalate	100		2.0 U
di-n-Butyl Phthalate	700		2.0 U
di-n-Octyl Phthalate	100		2.0 U
Fluoranthene	300		0.1 U
Fluorene	300		0.1 U
Hexachlorobenzene	0.02		0.02 U
Hexachlorobutadiene	1		1.0 U
Hexachlorocyclopentadiene	40		20 U
Hexachloroethane	7		5.0 U
Indeno(1,2,3-Cd)Pyrene	0.2		0.1 U
Isophorone	40		2.0 U
Naphthalene	300		0.1 U
Nitrobenzene	6		2.0 U
n-Nitroso-di-n-Propylamine	10		2.0 U
n-Nitrosodiphenylamine	10		5.0 U
Pentachlorophenol	0.3		0.3 U
Phenanthrene	100		0.1 U
Phenol	2000		2.0 U
Pyrene	200		0.1 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate, R - rejected, NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard, * = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-4
Ground Water Analytical Results
Metals Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D1 10/6/2009 ug/l	RCRA-D2 10/7/2009 ug/l	RCRA-D3 10/7/2009 ug/l
Aluminum	200		200 U	200 U	200 U
Antimony	6		6.0 U	6.0 U	6.0 U
Arsenic	3		3.0 U	3.0 U	3.0 U
Barium	6000		200 U	200 U	200 U
Beryllium	1		1.0 U	1.0 U	1.0 U
Cadmium	4		3.0 U	3.0 U	3.0 U
Calcium	NA		127,000	119,000	126,000
Chromium	70		10 U	10 U	10 U
Cobalt	NA		50 U	50 U	50 U
Copper	1300		10 U	10 U	10 U
Iron	300		143	100 U	100 U
Lead	5		3.0 U	3.0 U	3.0 U
Magnesium	NA		18,300	15,900	16,500
Manganese	50		15 U	15 U	15 U
Mercury	2		0.2 U	0.2 U	0.2 U
Nickel	100		10 U	10 U	10 U
Potassium	NA		10,000 U	10,000 U	10,000 U
Selenium	40		10 U	10 U	10 U
Silver	40		10 U	10 U	10 U
Sodium	50000		33,000	36,800	35,400
Thallium	2		2.0 U	2.0 U	2.0 U
Vanadium	NA		50 U	50 U	50 U
Zinc	2000		20 U	20 U	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-4
Ground Water Analytical Results
Metals Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D4 10/7/2009 ug/l	RCRA-D5 10/7/2009 ug/l	RCRA-D6 10/7/2009 ug/l
Aluminum	200		200 U	200 U	200 U
Antimony	6		6.0 U	6.0 U	6.0 U
Arsenic	3		3.0 U	3.0 U	3.0 U
Barium	6000		200 U	200 U	206
Beryllium	1		1.0 U	1.0 U	1.0 U
Cadmium	4		3.0 U	3.0 U	3.0 U
Calcium	NA		105,000	112,000	185,000
Chromium	70		10 U	10 U	10 U
Cobalt	NA		50 U	50 U	50 U
Copper	1300		10 U	10 U	10 U
Iron	300		100 U	100 U	100 U
Lead	5		3.0 U	3.0 U	3.0 U
Magnesium	NA		11,400	15,500	25,900
Manganese	50		15 U	37.8	47.2 Y
Mercury	2		0.2 U	0.2 U	0.2 U
Nickel	100		10 U	10 U	10 U
Potassium	NA		10,000 U	10,000 U	10,000 U
Selenium	40		10 U	10 U	10 U
Silver	40		10 U	10 U	10 U
Sodium	50000		32,200	**52,900 Y**	**95,900 Y**
Thallium	2		2.0 U	2.0 U	2.0 U
Vanadium	NA		50 U	50 U	50 U
Zinc	2000		20 U	20 U	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-4
Ground Water Analytical Results
Metals Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D7 10/7/2009 ug/l	RCRA-D8 10/8/2009 ug/l	RCRA-D8 DUP 10/8/2009 ug/l
Aluminum	200		200 U	200 U	200 U
Antimony	6		6.0 U	6.0 U	6.0 U
Arsenic	3		3.0 U	3.0 U	3.0 U
Barium	6000		200 U	386	376
Beryllium	1		1.0 U	1.0 U	1.0 U
Cadmium	4		3.0 U	3.0 U	3.0 U
Calcium	NA		93,400	80,300	78,400
Chromium	70		10 U	10 U	10 U
Cobalt	NA		50 U	50 U	50 U
Copper	1300		10 U	10 U	10 U
Iron	300		418 Y	260	238
Lead	5		3.0 U	3.0 U	3.0 U
Magnesium	NA		30,800	13,000	12,700
Manganese	50		**84.3 Y**	15 U	15 U
Mercury	2		0.2 U	0.2 U	0.2 U
Nickel	100		10 U	10 U	10 U
Potassium	NA		10,000 U	10,000 U	10,000 U
Selenium	40		10 U	10 U	10 U
Silver	40		10 U	10 U	10 U
Sodium	50000		**116,000 Y**	20,900	20,400
Thallium	2		2.0 U	2.0 U	2.0 U
Vanadium	NA		50 U	50 U	50 U
Zinc	2000		20 U	20 U	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-4
Ground Water Analytical Results
Metals Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D9 10/8/2009 ug/l	RCRA-D10 10/8/2009 ug/l	RCRA-D11 10/6/2009 ug/l
Aluminum	200		200 U	200 U	200 U
Antimony	6		6.0 U	6.0 U	6.0 U
Arsenic	3		3.0 U	3.0 U	3.0 U
Barium	6000		200 U	653	650
Beryllium	1		1.0 U	1.0 U	1.0 U
Cadmium	4		3.0 U	3.0 U	3.0 U
Calcium	NA		99,900	71,100	72,000
Chromium	70		10 U	10 U	10 U
Cobalt	NA		50 U	50 U	50 U
Copper	1300		10 U	10 U	10 U
Iron	300		**417 Y**	100 U	100 U
Lead	5		3.0 U	3.0 U	3.0 U
Magnesium	NA		15,200	8,010	11,600
Manganese	50		**2,420 Y**	15 U	15 U
Mercury	2		0.2 U	0.2 U	0.2 U
Nickel	100		10 U	10 U	10 U
Potassium	NA		10,000 U	10,000 U	10,000 U
Selenium	40		10 U	10 U	10 U
Silver	40		10 U	10 U	10 U
Sodium	50000		22,000	17,900	14,600
Thallium	2		2.0 U	2.0 U	2.0 U
Vanadium	NA		50 U	50 U	50 U
Zinc	2000		20 U	20 U	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-4
Ground Water Analytical Results
Metals Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D12 10/6/2009 ug/l	RCRA-D13 10/6/2009 ug/l	RCRA-D14 10/6/2009 ug/l
Aluminum	200		**228 Y**	200 U	200 U
Antimony	6		6.0 U	6.0 U	6.0 U
Arsenic	3		3.0 U	3.0 U	3.0 U
Barium	6000		200 U	960	554
Beryllium	1		1.0 U	1.0 U	1.0 U
Cadmium	4		3.0 U	3.0 U	3.0 U
Calcium	NA		144,000	71,400	60,600
Chromium	70		10 U	10 U	10 U
Cobalt	NA		50 U	50 U	50 U
Copper	1300		10 U	10 U	10 U
Iron	300		**2,580 Y**	100 U	100 U
Lead	5		3.0 U	3.0 U	3.0 U
Magnesium	NA		29,600	7,250	8,770
Manganese	50		**134 Y**	15 U	15 U
Mercury	2		0.2 U	0.2 U	0.2 U
Nickel	100		10 U	10 U	10 U
Potassium	NA		10,000 U	10,000 U	10,000 U
Selenium	40		10 U	10 U	10 U
Silver	40		10 U	10 U	10 U
Sodium	50000		30,100	16,400	15,500
Thallium	2		2.0 U	2.0 U	2.0 U
Vanadium	NA		50 U	50 U	50 U
Zinc	2000		20 U	20 U	20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-4
Ground Water Analytical Results
Metals Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D15 / 10/6/2009 / ug/l
Aluminum	200		200 U
Antimony	6		6.0 U
Arsenic	3		3.0 U
Barium	6000		482
Beryllium	1		1.0 U
Cadmium	4		3.0 U
Calcium	NA		75,600
Chromium	70		10 U
Cobalt	NA		50 U
Copper	1300		10 U
Iron	300		100 U
Lead	5		3.0 U
Magnesium	NA		10,800
Manganese	50		15 U
Mercury	2		0.2 U
Nickel	100		10 U
Potassium	NA		10,000 U
Selenium	40		10 U
Silver	40		10 U
Sodium	50000		14,400
Thallium	2		2.0 U
Vanadium	NA		50 U
Zinc	2000		20 U

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-5
Ground Water Analytical Results
Other Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D1 10/6/2009 ug/l	RCRA-D2 10/7/2009 ug/l	RCRA-D3 10/7/2009 ug/l
Total Organic Carbon	NA		1000 U	1000 U	1000 U
Total Organic Halides (Tox)	NA		50 U	50 U	100 U
Total Disolved Solids	500000		**518000 Y**	**502000 Y**	**564000 Y**

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-5
Ground Water Analytical Results
Other Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D4 10/7/2009 ug/l	RCRA-D5 10/7/2009 ug/l	RCRA-D6 10/7/2009 ug/l
Total Organic Carbon	NA		1000 U	1400	1700
Total Organic Halides (Tox)	NA		100 U	100 U	100 U
Total Disolved Solids	500000		**439000**	**562000 Y**	**972000 Y**

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-5
Ground Water Analytical Results
Other Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D7 10/7/2009 ug/l	RCRA-D8 10/8/2009 ug/l	RCRA-D8 DUP 10/8/2009 ug/l
Total Organic Carbon	NA		1600	1200	1000
Total Organic Halides (Tox)	NA		100 U	100 U	50 U
Total Disolved Solids	500000		**660000 Y**	391000	364000

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-5
Ground Water Analytical Results
Other Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D9 10/8/2009 ug/l	RCRA-D10 10/8/2009 ug/l	RCRA-D11 10/6/2009 ug/l
Total Organic Carbon	NA		3300	1000 U	1000 U
Total Organic Halides (Tox)	NA		50 U	100 U	50 U
Total Disolved Solids	500000		448000	347000	314000

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-5
Ground Water Analytical Results
Other Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D12 10/6/2009 ug/l	RCRA-D13 10/6/2009 ug/l	RCRA-D14 10/6/2009 ug/l
Total Organic Carbon	NA		3400	1000 U	1000 U
Total Organic Halides (Tox)	NA		50 U	100 U	50 U
Total Disolved Solids	500000		**617000 Y**	287000	237000

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

Table 4-5
Ground Water Analytical Results
Other Data
2009 Second Half Impound 8 Wells
Wyeth Holdings Corporation
Bound Brook Remediation Program

Chemical Name	GW Quality Standards ug/l	Sample ID / Sample Date / Unit	RCRA-D15 10/6/2009 ug/l
Total Organic Carbon	NA		1000 U
Total Organic Halides (Tox)	NA		50 U
Total Disolved Solids	500000		278000

NOTES: U = not detected, J = estimated value, B = blank contaminated, N = negate,
NA = no applicable criteria, Y = value exceeds Ground Water Quality Standard
* = MDL exceeds criteria due to limitations of the analytical method, --- = Not analyzed

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Dec 14, 2009 - 3:52pm

LEGEND

OVERBURDEN WELL LOCATION

(1) IMPOUNDMENT DESIGNATION

DRAWING NOTES:

1. MAP BASED ON AMERICAN DIGITAL CARTOGRAPHY, INC. TIGER DATA MAP. BOUND BROOK 7.5 MINUTE QUADRANGLE.
2. GROUND WATER ELEVATIONS ARE IN FEET AND REFERENCED TO MEAN SEA LEVEL. (ADD 69.29 FEET FOR SITE DATUM)

NO.	DATE	REVISION	INIT.

WYETH HOLDINGS CORPORATION
MADISON, NEW JERSEY

BOUND BROOK REMEDIAL PROGRAM
TASK 2.10 SITE-WIDE SEMI-ANNUAL MONITORING

OVERBURDEN MONITORING WELL LOCATION PLAN

IN CHARGE OF ANGELO J. CARACCIOLO FILE NO. 5772.43892.002

DESIGNED BY SMT CHECKED BY GAS DRAWN BY SED

900 0 900

SCALE:1"=900'-0"

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DATE: 12/14/09

FIGURE 3-1

LEGEND

- BEDROCK WELL LOCATION
- OPEN BEDROCK WELL RETROFITTED WITH FLUTE LINERS
- (1) IMPOUNDMENT DESIGNATION

DRAWING NOTES:

1. MAP BASED ON AMERICAN DIGITAL CARTOGRAPHY, INC. TIGER DATA MAP. BOUND BROOK 7.5 MINUTE QUADRANGLE.
2. GROUND WATER ELEVATIONS ARE IN FEET AND REFERENCED TO MEAN SEA LEVEL. (ADD 69.29 FEET FOR SITE DATUM)

NO.	DATE	REVISION	INIT.

WYETH HOLDINGS CORPORATION
MADISON, NEW JERSEY

BOUND BROOK REMEDIAL PROGRAM
TASK 2.10 SITE-WIDE SEMI-ANNUAL MONITORING

BEDROCK WELL LOCATION MAP

IN CHARGE OF ANGELO J. CARACCIOLO FILE NO. 5772.43892.003

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DATE: 12/14/09

FIGURE 3-2

Contour Map Reporting Form

Figure 3-3: Site Wide Semi-Annual Monitoring
Main Plant Overburden Ground Water Contour Map
(October 5, 2009)

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary**.**

1. Did any surveyed well casing elevations change from the previous sampling event? Yes ☐ No ☒
   If yes, attach new "Well Certification-Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc...)

2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes ☒ No ☐
   If yes, identify these wells.
   -28-R, O-R, 19-R, AAA, CCC-R, EEE-R, MW-7, III, KKK, 16MW-2, 32-R, 34-R, 36-R, 38-R, 41-R, 42R, and TFP-94-1R2 Consistent with historic trends, does not interfere with obtaining representative samples

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes ☐ No ☒
   Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this event? Yes ☐ No ☒
   Were any of the monitoring wells with separate phase product included in the ground water contour map?
   If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes ☐ No ☒
   If yes, discuss the reasons for the change.

6. Has ground water mounding and/or depressions been identified in the ground water contour map? Yes ☒ No ☐
   Unless the ground water mounds and / or depressions are caused by the ground water remediation system, discuss the reasons for the occurrence.
   -Mounding beneath Lagoon 7 is likely due to the water level in Lagoon 7
   - Mounding beneath the MW-10 area is due to the location between discharge points represented by Cuckolds Brook and the capture of overburden groundwater by the bedrock pumping system.
   -Depression beneath MW-05-WS1 area is likely due to pumping of bedrock ground water at PW-2 and PW-3 capturing overburden groundwater.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes ☒ No ☐
   If no, justify inclusion of those wells.

8. Were the ground water contours
   ☐ computer generated
   ☐ computer aided, or
   ☒ hand-drawn?
   If computer aided or generated, identify the interpolation method(s) used.

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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

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IN CHARGE OF ANGELO J. CARACCIOLO

DESIGNED BY SMT CHECKED BY CYV

DRAWN BY SED

1"=250' 250 0 250 500

NO.	DATE	REVISION	INIT.

O'BRIEN & GERE

WYETH HOLDINGS CORPORATION
BOUND BROOK REMEDIAL PROGRAM
BRIDGEWATER, NEW JERSEY

TASK 2.10 SITE-WIDE SEMI-ANNUAL MONITORING
OVERBURDEN WATER TABLE MAP
OCTOBER 05, 2009

FILE NO. 5772.43892.020

DATE DECEMBER 2009

3-3

Contour Map Reporting Form

Figure 3-4: Site Wide Semi-Annual Monitoring
Bedrock Ground Water Contour Map
(October 5, 2009)

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes ☐ No ☒
   If yes, attach new "Well Certification-Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc.).

2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes ☐ No ☒
   If yes, identify these wells.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes ☐ No ☒
   Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

4. Are there any monitoring wells containing separate phase product during this event? Yes ☐ No ☒
   Were any of the monitoring wells with separate phase product included in the ground water contour map?
   If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes ☐ No ☒
   If yes, discuss the reasons for the change.

6. Has ground water mounding and / or depressions been identified in the ground water contour map? Yes ☒ No ☐
   Unless the ground water mounds and / or depressions are caused by the ground water remediation system, discuss the reasons for the occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes ☐ No ☒
   If no, justify inclusion of those wells.
   - Consistent with historical practice. Wells that did not have screens that intersected the upper moderately conductive zone including SS (Port 1), WW (Port 1), XX (Port 1), ZZ (Port 1), AAAA-S, CCCC-S, GGGG (Port 3), IIII-S, and JJJJ-O were selected based on screen depth that most closely correlated in depth to adjacent wells that had a screen that did intersect the zone.

8. Were the ground water contours
   ☐ computer generated
   ☐ computer aided, or
   ☒ hand-drawn?
   If computer aided or generated, identify the interpolation method(s) used.

Sep 16, 2008 - 8:25am

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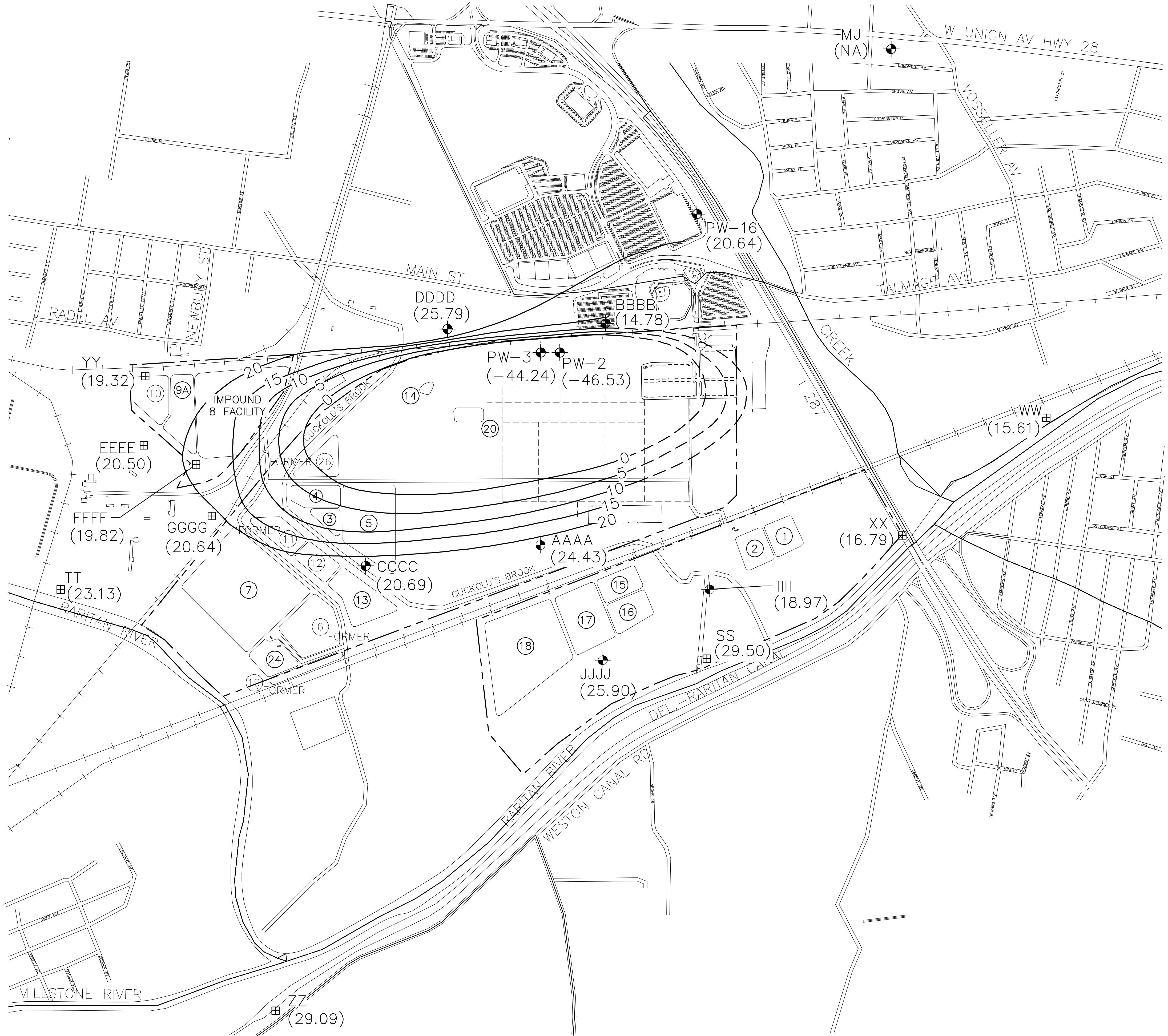

LEGEND

- BEDROCK WELL LOCATION
- OPEN BEDROCK WELL RETROFITTED WITH FLUTE LINERS (SEE TABLE 3-4 GROUND WATER ELEVATIONS)
- (1) IMPOUNDMENT DESIGNATION
- (15.43) GROUND WATER ELEVATION
- GROUND WATER CONTOUR (DASHED WHERE INFERRED)

DRAWING NOTES:

1. MAP BASED ON AMERICAN DIGITAL CARTOGRAPHY, INC. TIGER DATA MAP. BOUND BROOK 7.5 MINUTE QUADRANGLE.
2. GROUND WATER ELEVATIONS ARE IN FEET AND REFERENCED TO MEAN SEA LEVEL. (ADD 69.29 FEET FOR SITE DATUM)

NO.	DATE	REVISION	INIT.

WYETH HOLDINGS CORPORATION
MADISON, NEW JERSEY

BOUND BROOK REMEDIAL PROGRAM
TASK 2.10 SITE-WIDE SEMI-ANNUAL MONITORING

BEDROCK GROUND WATER CONTOUR MAP (OCTOBER 5, 2009)

IN CHARGE OF ANGELO J. CARACCIOLO FILE NO. 5772.43892.038

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1000 0 1000
SCALE: 1"=1000'-0"

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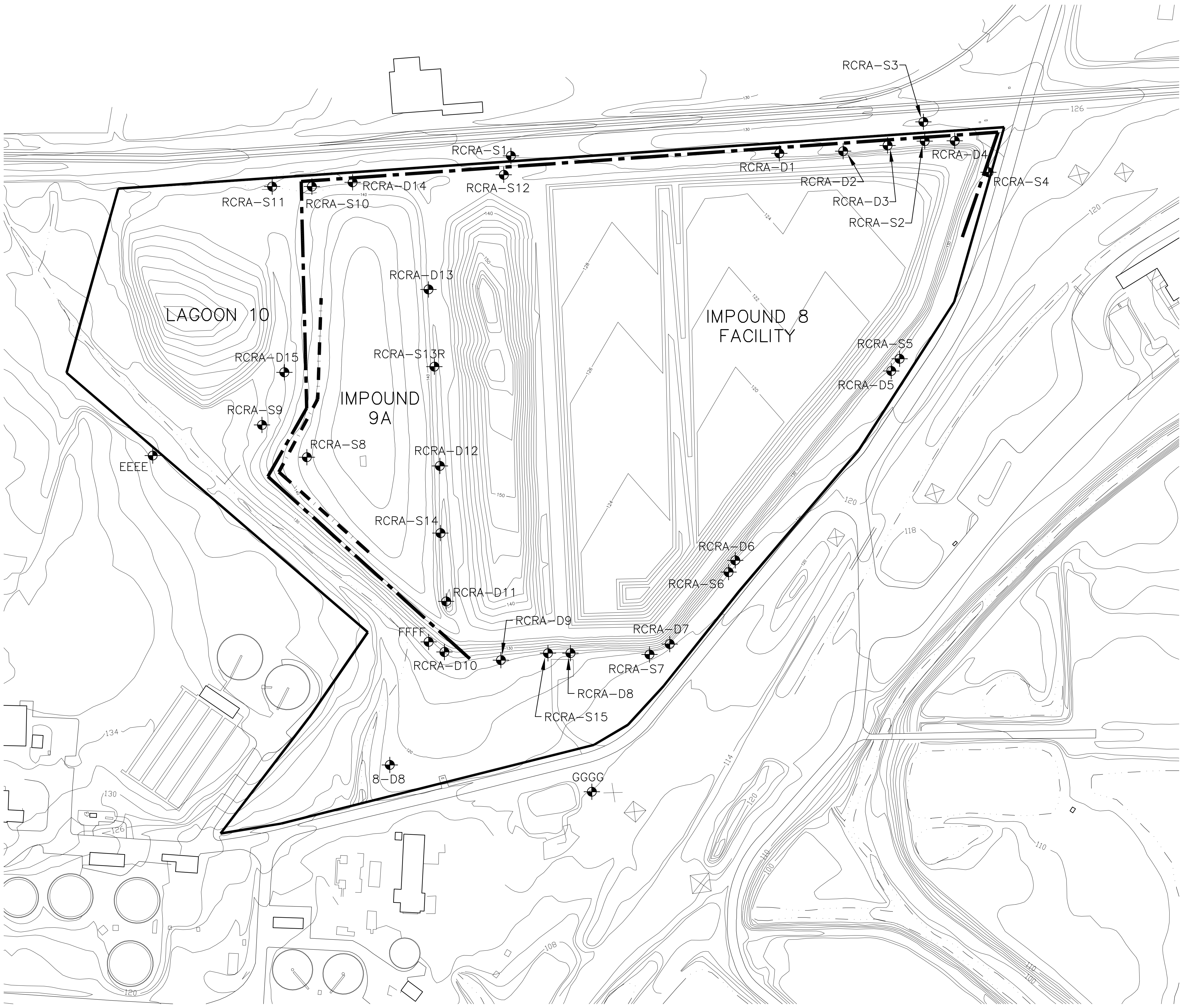
DATE: 12/14/09

FIGURE 3-4



LEGEND

- MONITORING WELL
- GROUND WATER CUT-OFF WALL (APPROX. LOCATION)
- GROUND WATER INTERCEPTOR TRENCH (APPROX. LOCATION)
- PROPERTY LINE
- LEACHATE COLLECTION SYSTEM MANHOLE/DETECTION SYSTEM SUMP

DRAWING NOTES:

1. EXISTING SITE PLAN INFORMATION SHOWN ON THIS DRAWING OBTAINED FROM AUTOCAD BASED FILE PROVIDED BY AMERICAN CYANAMID COMPANY. DRAWING FILE NUMBER 5225A4.DWG.
2. SURFACE ELEVATIONS ARE REFERENCED TO FACILITY DATUM. (FACILITY DATUM BASED ON U.S.G.S PLUS 69.29 FEET)
3. GROUND WATER ELEVATIONS ARE IN FEET AND REFERENCED TO MEAN SEA LEVEL. (ADD 69.29 FEET FOR SITE DATUM)

NO.	DATE	REVISION	INIT.

WYETH HOLDINGS CORPORATION
MADISON, NEW JERSEY

BOUND BROOK REMEDIAL PROGRAM
TASK 2.10 SITE-WIDE SEMI-ANNUAL MONITORING
IMP. 8 MONITORING WELL
LOCATION PLAN

IN CHARGE OF ANGELO J. CARACCIOLO FILE NO. 5772.43892.001

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200 0 200
SCALE:1"=200'-0"

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DATE: 12/14/09

FIGURE 4-1

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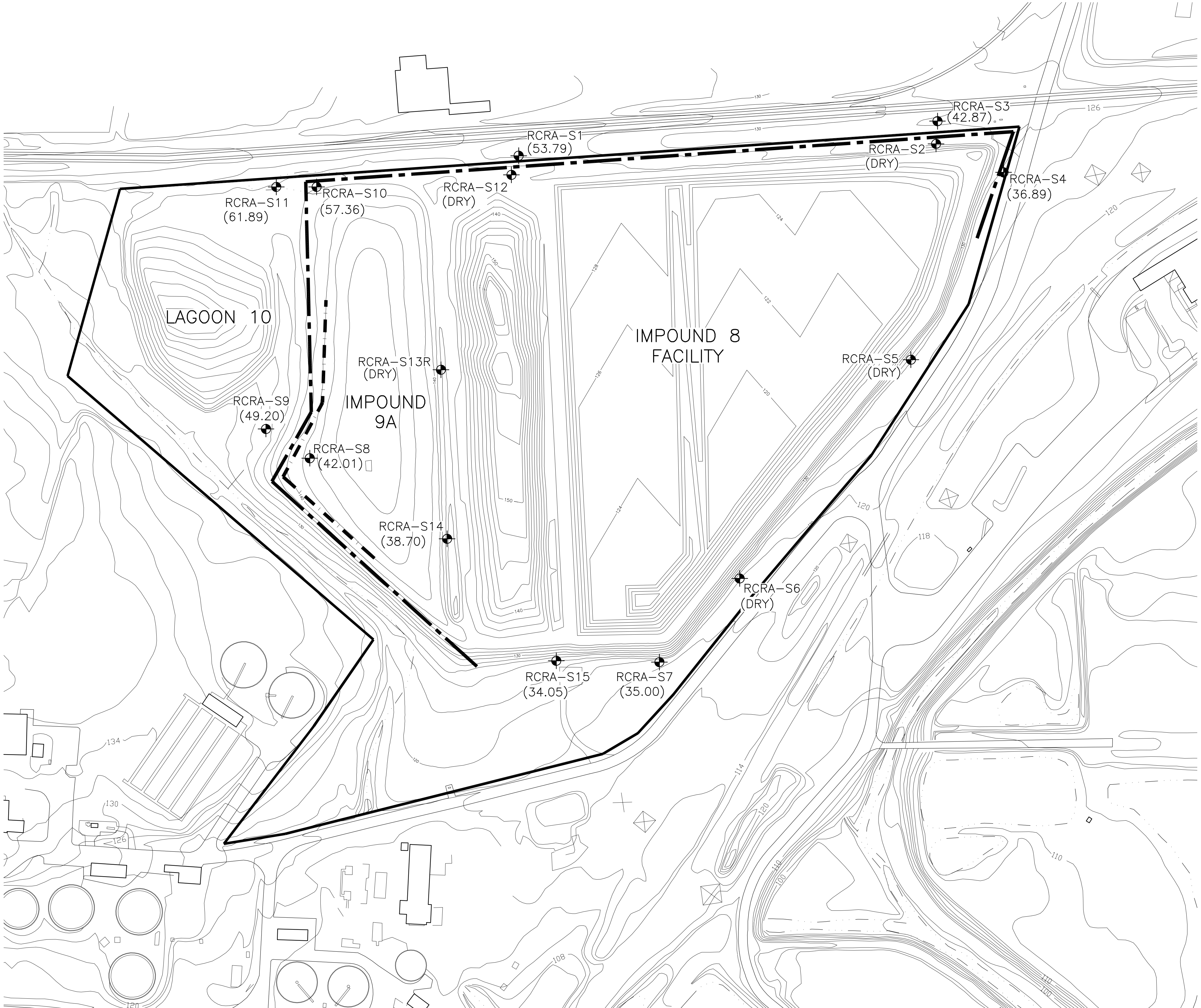
Dec 14, 2009 - 3:45pm



LEGEND

- (36.83) GROUND WATER ELEVATION (ft.)
- MONITORING WELL LOCATION
- GROUND WATER CUT-OFF WALL (APPROX. LOCATION)
- GROUND WATER INTERCEPTOR TRENCH (APPROX. LOCATION)
- PROPERTY LINE
- LIMITS OF WATER

DRAWING NOTES:

1. EXISTING SITE PLAN INFORMATION SHOWN ON THIS DRAWING OBTAINED FROM AUTOCAD BASED FILE PROVIDED BY AMERICAN CYANAMID COMPANY. DRAWING FILE NUMBER 5225A4.DWG.
2. SURFACE ELEVATIONS ARE REFERENCED TO FACILITY DATUM. (FACILITY DATUM BASED ON U.S.G.S. PLUS 69.29 FEET)
3. GROUND WATER ELEVATIONS ARE IN FEET AND REFERENCED TO MEAN SEA LEVEL. (ADD 69.29 FEET FOR SITE DATUM)

NO.	DATE	REVISION	INIT.

WYETH HOLDINGS CORPORATION
MADISON, NEW JERSEY

BOUND BROOK REMEDIAL PROGRAM
TASK 2.10 SITE-WIDE SEMI-ANNUAL MONITORING
IMP. 8 OVERBURDEN GROUND WATER ELEVATION PLAN (OCTOBER 5, 2009)

IN CHARGE OF ANGELO J. CARACCIOLO FILE NO. 5772.43892.009

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200 0 200
SCALE: 1"=200'-0"

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DATE: 10/14/09

FIGURE 4-2

Contour Map Reporting Form

Figure 4-3: Impound 8 - Semi-Annual Monitoring
Shallow Bedrock Wells Ground Water Contour Map
(October 5, 2009)

This reporting form shall accompany each ground water contour map submittal. Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes ☐ No ☒
   If yes, attach new "Well Certification-Form B" and identify the reason for the elevation change (damage to casing, installation of recovery system in monitoring well, etc...)

2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is higher than the top of the well screen? Yes ☐ No ☒
   If yes, identify these wells.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes ☐ No ☒
   Unless the omission of the well(s) has been previously approved by the Department, justify the omissions.

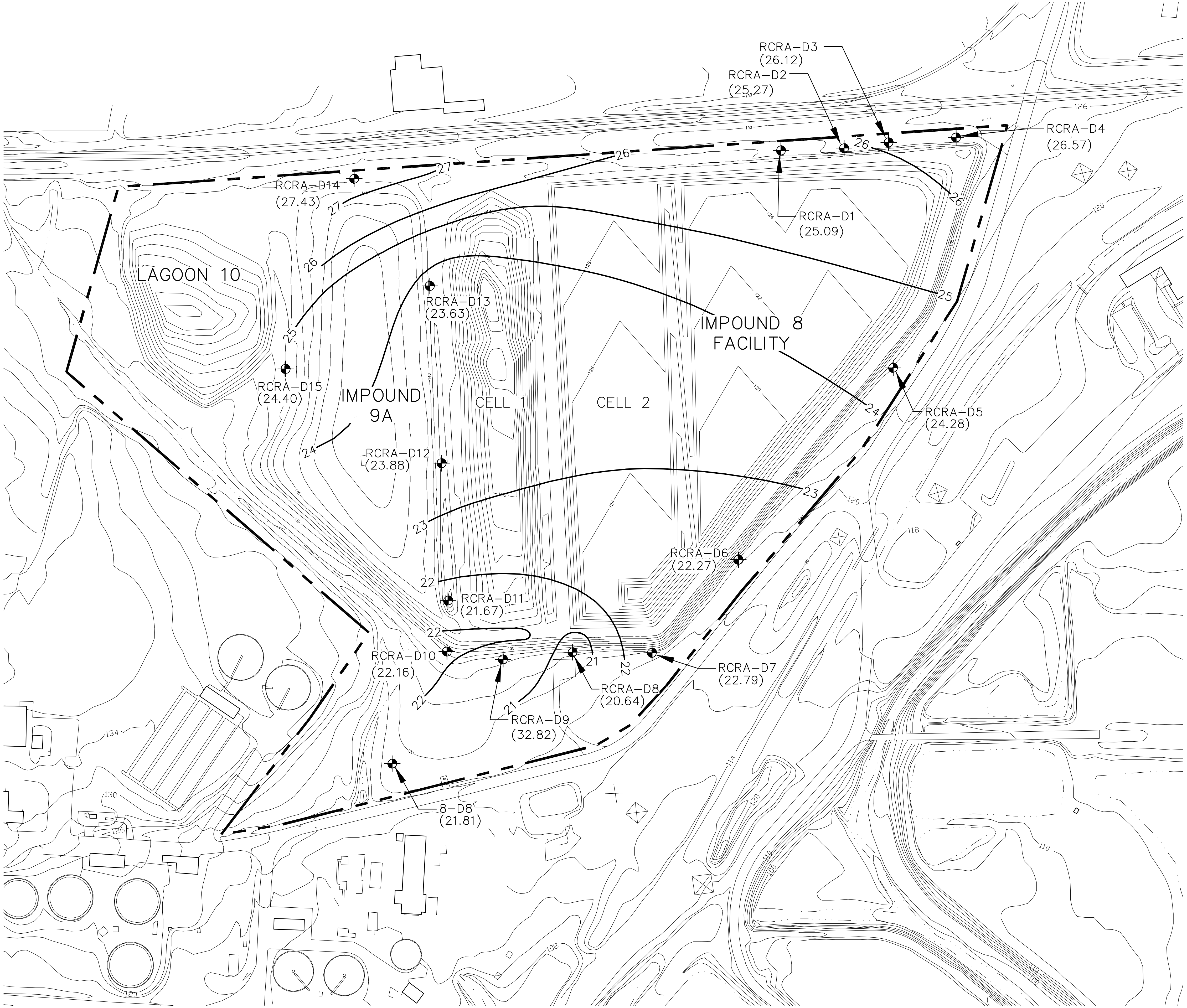
4. Are there any monitoring wells containing separate phase product during this measuring event? Yes ☐ No ☒
   Were any of the monitoring wells with separate phase product included in the ground water contour map?
   If yes, show the formula used to correct the water table elevation.

5. Has the ground water flow direction changed more than 45° from the previous ground water contour map? Yes ☐ No ☒
   If yes, discuss the reasons for the change.

6. Has ground water mounding and / or depressions been identified in the ground water contour map? Yes ☐ No ☒
   Unless the ground water mounds and / or depressions are caused by the ground water remediation system, discuss the reasons for the occurrence.

7. Are all the wells used in the contour map screened in the same water-bearing zone? Yes ☐ No ☒
   If no, justify inclusion of those wells.

8. Were the ground water contours
   ☐ computer generated
   ☐ computer aided, or
   ☒ hand-drawn?
   If computer aided or generated, identify the interpolation method(s) used.



LEGEND

- SHALLOW BEDROCK WELL
- GROUND WATER CONTOUR (DASHED WHERE INFERRED)
- GROUND WATER ELEVATION
- PROPERTY LINE

DRAWING NOTES:

1. EXISTING SITE PLAN INFORMATION SHOWN ON THIS DRAWING OBTAINED FROM AUTOCAD BASED FILE PROVIDED BY AMERICAN CYANAMID COMPANY. DRAWING FILE NUMBER 5225A4.DWG.
2. SURFACE ELEVATIONS ARE REFERENCED TO FACILITY DATUM. (FACILITY DATUM BASED ON U.S.G.S. PLUS 69.29 FEET)
3. GROUND WATER ELEVATIONS ARE IN FEET AND REFERENCED TO MEAN SEA LEVEL. (ADD 69.29 FEET FOR SITE DATUM)
4. GROUND WATER ELEVATION RCRA-D9 IS PROVIDED BUT WAS NOT USED TO PRODUCE CONTOURS.

NO.	DATE	REVISION	INIT.

WYETH HOLDINGS CORPORATION
MADISON, NEW JERSEY

BOUND BROOK REMEDIAL PROGRAM
TASK 2.10 IMP. 8 SEMI-ANNUAL MONITORING
IMP. 8 SHAL. BEDROCK WELL GROUND WATER ELEV. MAP (OCTOBER 5, 2009)

IN CHARGE OF ANGELO J. CARACCIOLO FILE NO. 5772.43892.040
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SCALE:1"=200'-0"

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DATE: 12/14/09

FIGURE 4-3

Appendix A

Procedures

FLUTe® Procedures

MANUAL WATER LEVEL MEASUREMENT PROCEDURE

Manual water level measurements will be collected from monitoring wells and Water FLUTe installations, not equipped with dedicated pressure transducers, in accordance with the procedures called out below.

Procedures Applicable to Water Level Data Collection at all Locations

- A new pair of latex gloves will be donned.
- The electronic water level probe will lowered into the casing/tube until the meter indicates water is reached (audible alarm).
- The probe will be raised above the water level and slowly lowered again until water is indicated.
- The cable will be held at the point designated for water level measurements (top of casing reference point) and a depth reading taken.
- This procedure will be followed three times or until a consistent value is obtained.
- The value will be recorded to the nearest 0.01 feet in a field notebook.
- The time of the measurement and the reference point will be recorded in a field notebook.
- The probe will be raised to the surface and, together with the amount of cable that was wetted in the well, will be decontaminated as follows:

1. Wiped dry with paper towel.
2. Rinsed with potable water and laboratory detergent.
3. Rinsed with distilled/deionized water.

Procedures Specific to Water Level Data Collection at Water FLUTe Installations

Due to the check valve in the pumping system, the water level in the ½" tube may be higher than the actual head in the formation if the system has not been purged. As such, head measurements must be made after purging the pump system. Each sampling port must therefore be purged prior to water level collection in accordance with the following procedure:

- Connect the compressed nitrogen tank to the quick connect fitting on the ½ inch diameter side of the pump tube.
- Open the valve on the nitrogen tank and adjust the pressure (typically on the order of 100 psi.) to the manufacturers recommended pressure for purging at the installation of interest. Note: All sample ports may be purged simultaneously using a header assembly available through FLUTe.

- Purge the pump tube until the nitrogen gas is discharging from the sampling side of the pump tube (small side of the tube).

- Release the nitrogen tank pressure and disconnect from the quick connect fitting.

- Using a "slime-line" water level meter (probe must be less than 3/8 inch diameter), pass the probe through the quick connect fitting and down the ½ inch diameter tube. (Water level meters suitable for this purpose can be obtained from Herron Instruments).

- Continue measurements until the water level has stopped rising. Record the final measurement. (This typically takes 7 to 8 minutes depending on the hydraulic conductivity of the formation).

Notes: The above procedure is suitable for depths to water of less than approximately 150 feet below the measuring point. For water tables greater than this depth, pressure transducers are required. The water level meter must not have weights below the measuring point as the weight will displace the water in the tube and provide an inaccurate measurement. Additional sampling and purging information may be found at http://www.flut.com/

FLUTe™ Flexible Liner Underground Technologies, Ltd. L.C.
For a medley of innovative designs
6 Easy St., Santa Fe, NM 87504
505-455-1300, www.flut.com

Sampling guidelines for *Water FLUTe* systems

(valve tubing pumping system) rev. 2/23/04

Water flow

Water flows from the formation into the spacer pore space, into the port, and fills the tubing. The first tube filled is the "port tube" volume that flows into the U tube. The U tube consists of the "large tube volume" and the "sampling tube volume" (see the attached drawing).

Purging

Water is pumped from the tubing by applying a gas pressure to the interface at the static water level in the large tube. The water is driven down in the large tube and up through the second check valve to the surface via the sampling tube. By driving the water with a sufficient gas pressure to drive all of the water in the large tube and the sampling tube to the surface (the "recommended purge pressure"), the water in the U tube is nearly all expelled. The purge stroke is complete when gas is expelled following the water flow. The pressure in the system must then be vented, to allow the U tube to refill by flow via the port tube. The flow from the port tube consists of the port tube water, the water in the pore space of the spacer, and water from the medium. Because of the relatively large volume in the large tube, most of the recharge is from the medium. The recharge will take about as long as the first purge stroke. However, a tight medium will require more time.

Purging the U tube a second time will remove any of the water that has resided in the spacer and port tube volume. That is highly recommended, since the water resident in the tubing and spacer is probably not typical of the formation water. If the refill has been prompt, the second purge water volume will be similar to the first stroke. If in doubt, or if in a sedimentary formation or screened well, a third purge stroke is recommended to remove water that may have been in long contact with the liner or spacer.

Sampling

The sampling flow is best driven on the third (or fourth) cycle by a pressure less than that needed to drive air through the bottom of the U tube. The pressure recommended is that which will drive the water to near, but not out of, the bottom of the large tube. That recommended pressure, "the sampling pressure," is calculated in the spreadsheet provided with each system.

The first flow of the sampling cycle sweeps along droplets of water left in the tubing from the purge cycle. That residual water is depleted of volatile components. Tests have shown that the first tube volume of the sample flow should be discarded as depleted in volatiles (the sample tube volume is also calculated in the spreadsheet). Thereafter, the samples can be collected from the tube outflow. The volume to be discarded is shown in the spreadsheet as "wetted vol. sam. tube". The sample water flow rate will slow and finally stop. That occurs as the water column being driven approaches the applied pressure. The typical sampling pressure drives to within 20 ft. of the bottom of the pump tube (the U).

This procedure should provide an ample sample of good quality drawn directly from the formation.

Caution: If the pumping system refills very slowly, there may not be sufficient water in the pump to fill the "sample tube" to the surface when the stroke is performed. In that case, there will be spitting of gas from the sample water and it will be followed by a flow of gas only. The sample water should never show "spitting" and the stroke should never end with gas flow from the sample tube. The proper sample flow will slow until it stops flowing. Should this evidence of insufficient recharge be observed, allow the pump to refill for a longer time. One can tag the water level in the large tube, as described in the head measurement procedure, to assure that the pumping system has been sufficient refilled.

Measuring the head in the system

The water level in the large tubes may not be the current water level. After sampling, if there is any leakage of the second check valve (sand in the tube, etc…) the water in the sample tube can backflow into the larger tube, adding to the water that fills the large tube during the recharge. Also, if the water level in the formation is dropping between head measurements, the water level in the large tube will not follow the descent if the first check valve is a good seal. For these two reasons, and for the freezing concern below, it is best to <u>finish the sampling stroke by raising the pressure to the purge pressure value</u> to purge the pumping system of all water. Then upon refilling, the level is the current head for each port. If head measurements are made between sampling events, <u>each port's pumping system should be first be purged</u> to allow the tubing to refill to the current head value.

Note, an access tube is provided for tagging the water level in the interior of the liner. The liner water level should be maintained at the proper level (typically 10 ft above the water table, except for more shallow water tables) to assure that the liner is providing a good seal. If the level is less than that desired, add a small amount of water to raise the level. Be aware that for deep water tables, it may take up to 5 minutes for the water level to equilibrate after an addition. Do not overfill the liner. Estimate the correct addition based upon the hole diameter.

If the water might freeze in the sampling tubing near the surface, purge the entire volume of water from each sampling line, after sampling, before leaving it. Use the recommended purge pressure to remove all water, <u>not the sampling pressure</u>. **Each line should be blowing air/N2 when the purge is complete.** If the lines were purged after sampling for head measurements, that is sufficient.

If the Water FLUTe uses PVDF tubing, the purge of the entire system after sampling should not be neglected, even if head measurements are not to be made. This removes the water column in the sampling tube. For deep water tables, the long term pressure of the standing water in the sampling tube might lead to excessive creep of the tubing which is susceptible to "cold flow", a characteristic of Teflon like materials. (This is not a concern except for very deep water tables (>300 ft).

In most cases, the performance of a final purge of the system after sampling is useful, even if not essential.

Simultaneous purge and sampling of all tubes
The FLUTe pumping system for each port is essentially identical in length, pump volume and elevation in the hole. This allows all ports to be purged and sampled simultaneously for a great saving in sampling time. The only difference for simultaneous sampling is that the pressure source must

include a tube to each port fitting at the wellhead. The recommended purge and sample pressures are the same as used for single port sampling.

In some cases, the buoyancy of the sampling system is so great when emptied of water during the simultaneous purge that the tubing bundle can cause the liner to invert. The sampling volume spreadsheet provided with the liner notes whether the system can be purged simultaneously. This is only a problem for smaller hole diameters, many ports, and a small excess head in the liner. However, increasing the excess head in the liner to overcome the buoyancy of the tubing can be a hazard to the liner.

A short summary is provided as the following checklist:

<u>Check List</u>

1. Connect the gas driver source to the gas drive tube on the large tube. Set the regulator to the recommended purge pressure.
2. Expel the tube water at the suggested purge pressure. Collect the purged water volume for verification of a good purge. Note the water flow time of the purge stroke.
3. Allow the tubing to refill. Repeat the purge. Collect the purge volume to assure the amount removed is at least the "port tube volume". Was the refill long enough?
4. Purge a third time, if desired.
5. Allow the tubing to refill for the sample stroke.
6. <u>Reduce the driving pressure</u> to the "sampling pressure". Apply the pressure and collect the first flow to measure the discard volume. Discard that water.
7. Reduce the pressure, if needed, to slow the flow and collect the samples.
8. Perform a final purge of the water out of the sampling lines by raising the driving pressure to the purge pressure value.
9. When the sampling system has refilled, tag the water level, if desired, for the current water table. If a port system is refilling very slowly, tag it at a later time.

See the spreadsheet provided with each *Water FLUTe* for the recommended purge and sampling pressures. Those are the pressures that can be used for a simultaneous purge of the several ports, but be sure that the buoyancy of the tubing will not lift the tubing, and the wellhead. The spreadsheet flags the condition where all ports should not be purged simultaneously. In most cases, several of the ports can be purged simultaneously.

Optimum sampling procedure:
Since it is often desirable to minimize the amount of time that the sample water resides in the pumping tubing, it is useful to note the actual time that is required for the recharge of the system. Since the fill rate slows dramatically for the last portion of the recharge, it is not necessary to wait for a complete refill. For most formations, the recharge is dominated by the tubing pressure drop. In that case, the time required for the purge stroke to be completed is about the same time required for the refill. (The exception is for a tight formation that recharges the tubing very slowly.) Hence the second purge can be started after waiting the same length of time as the first purge endured. If the second purge is of a similar volume (usually somewhat less) than the first purge volume, the refill time was long enough. After the same delay, the sampling stroke can be initiated. This timing of the strokes allows one to reduce the retention time in the pumping system. For very large sample volumes produced, the refill time can be shortened even more, as long as the sample volume is adequate after the discard of the first flow.

In some situations, the retention time is still too long. FLUTe can often increase the sample tube and port tube diameters for greater flow rates. However, the standard design is well matched for to a wide range of hole diameters, depths, and water table elevations. For very deep wells, the tubing may need to be of higher pressure capacity for the required driving pressures. For water table depths below 700 ft., this may be a concern. In some situations, the use of more expensive fluoropolymer (e.g. PVDF) tubing is warranted to minimize interaction with very low levels of contamination. The normal FLUTe tubing used until June, 2002 was Nylon 11 for its qualities of strength, relatively low contaminant absorption(compared to polyethylene), cost, and elasticity. Nylon 11 does leach butyl benzene sulphonamide in ppb levels. This does not interfere with most contaminant evaluations, in particular the chlorinated solvents and volatile organics. It can be mistaken for HE contamination if not measured carefully. FLUTe initiated a design change to all PVDF tubing in the Water FLUTe systems in 2002 to avoid any concern about tubing interaction with the sample water. However, the prescribed purge is sufficient for the use of Nylon tubing systems.

Questions: Call 888-333-2433 and ask for Carl Keller, or a field engineer.

Geometry of sampling system for each port

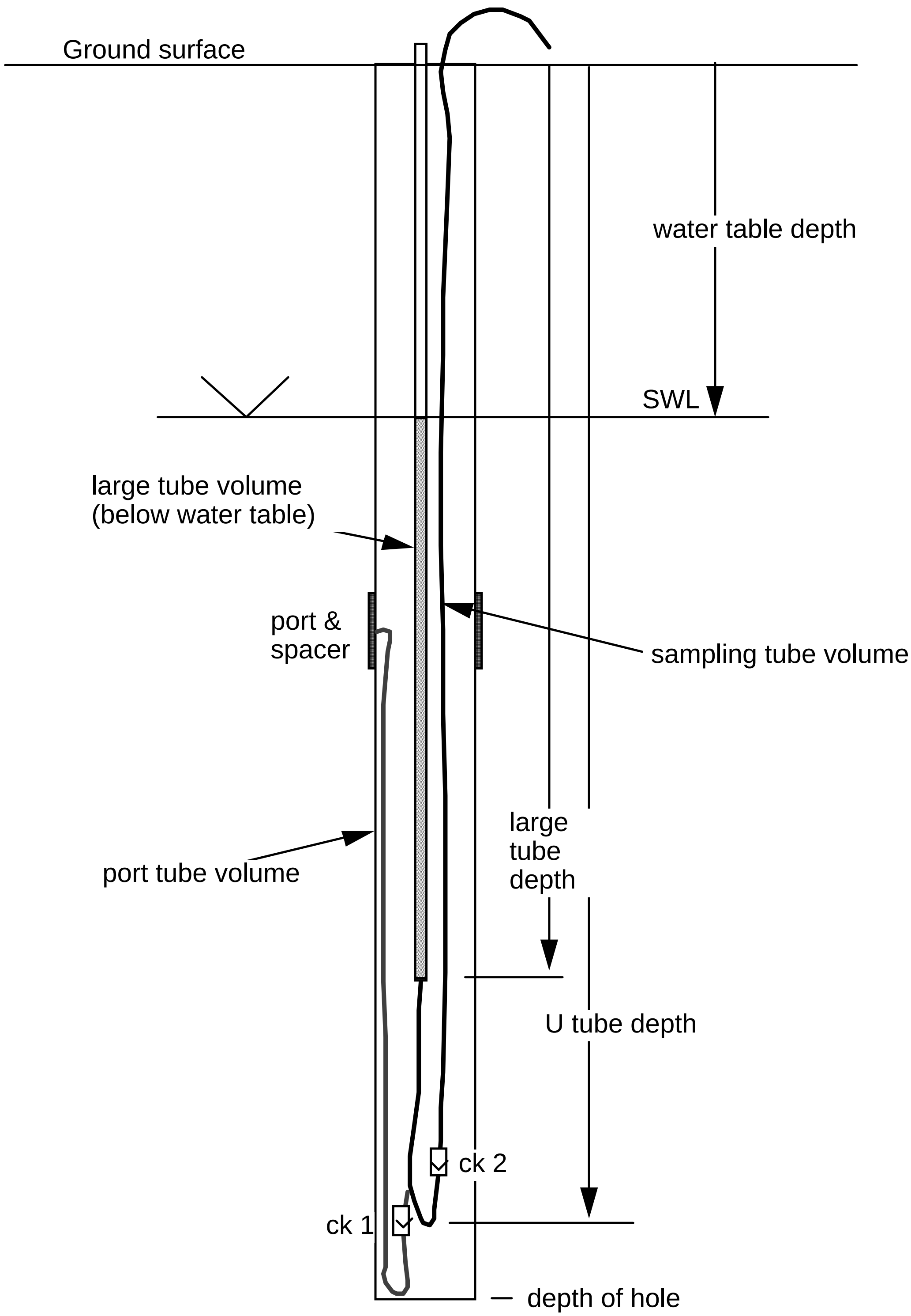


Fig. 1.. Water FLUTe valved tubing pumping system (Recharge flow)

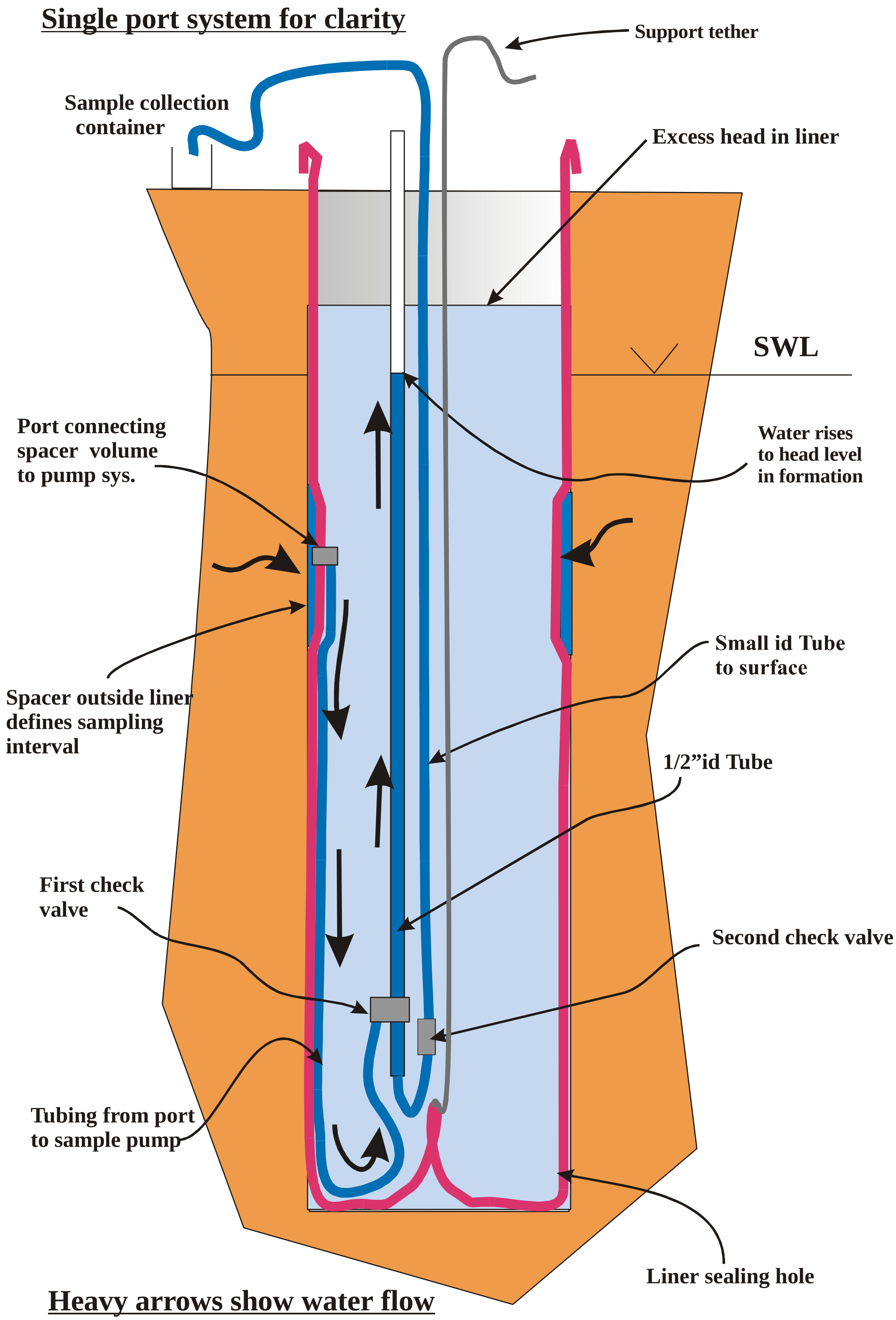
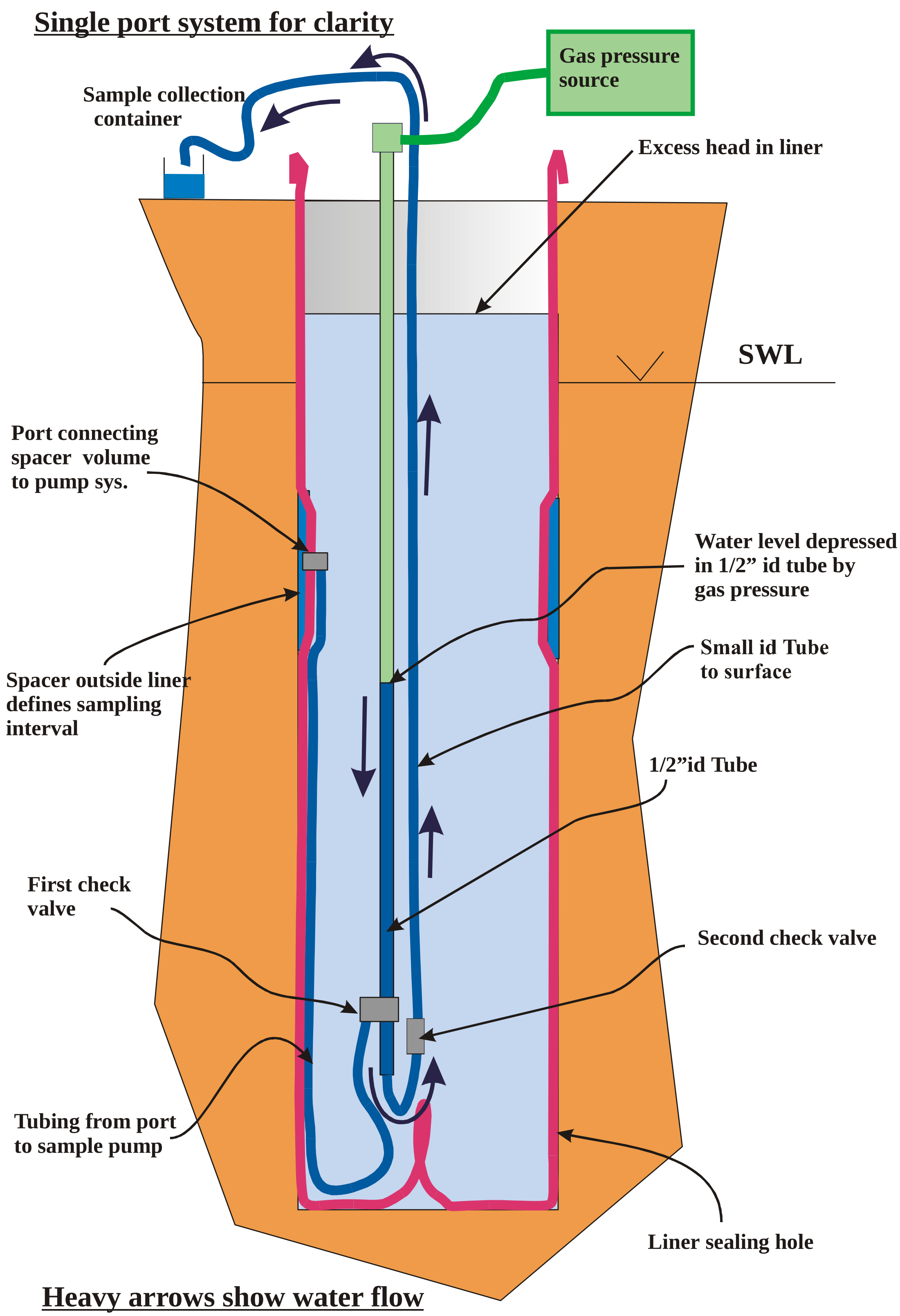


Fig. 2. Water FLUTe Pump Stroke



WATER FLUTe CONSTRUCTION, PURGE VOLUMES AND SAMPLING GUIDELINES

Well	FLUTe Filling Liquid	Depth[#] to liquid inside FLUTe [ft]	Depth to FLUTe collar [ft]	Port 1			Port 2			Port 3			Port 4		
				Volume [Gal] Per stroke	Total	Recovery time* [min]	Volume [Gal] Per stroke	Total	Recovery time* [min]	Volume [Gal] Per stroke	Total	Recovery time* [min]	Volume [Gal] Per stroke	Total	Recovery time* [min]
EEEE	Water														
FFFF	Water														
GGGG	Bentonite														
SS	Barite/Bentonite														
TT	Water														
WW	*Barite/Bentonite*														
XX	Barite/Bentonite														
YY	Bentonite														
ZZ	Barite/Bentonite														
MP03-MP1	Barite/Bentonite														
MW05-MP1	Barite/Bentonite														
MP11-MP1	Barite/Bentonite														

[#] Measured with a conventional water level indicator, by introducing the probe into the 6" FLUTe liner. All depths referred to TOC marker.

*Time required for water level to recover to 20' (or less) below the static water level.

SAMPLING GUIDELINES:

A. It takes 400 ft^3 of N_2 (5 small bottles, 80 ft^3 ea (recommended) or 2 "T" bottles (300 ft^3 ea)) for each sampling event at the 12 FLUTe wells.

B. Each port must be purged two times before sampling. Except port 3 at Well XX , which must be purged just once.

C.The pressure for the purge strokes is 110 psi; the sampling stroke is 75 psi. Each stroke takes between 6 and 10 minutes.

D.It takes about two hours to purge and sample each well following these steps:

1. Set and secure the end of sampling line (1/8") for each port into a plastic container to keep track of the purge volume.
2. Connect the manifold to the N2 tank and to each of the port's pressurization lines (1/2" quick-disconnect fittings). Make sure fittings click together.
3. Close the 5 one-way valves in the manifold and set the three-way valve to allow flow from the tank to the ports.
4. Open the N2 tank valve and set the regulator to 110 psi. Always keep away from the well head when the N2 tank valve is open; if any accidental blow occurs, close the N2 tank valve before doing anything else.
5. Purge all the ports at the same time, by opening the one-way valves of the lines connected to the ports, and waiting until N2 starts to blow from all the sampling lines. At this time, bleed the N2 from the ports by setting the three-way valve to the position open to the atmosphere, which makes a distinctive gas-flow sound. No other valve needs to be adjusted.
6. Complete the second purge after the longest recovery time at any port (as stated in the table above) has been reached. Reset the three-way valve to allow N2 flow from the tank to the ports, and wait until N2 starts to blow from all the sampling lines.
7. Close all the one-way valves. Reduce the regulator pressure to 75 psi; you will need to bleed some N2 by briefly opening the three-way valve to the atmosphere.
8. Sequentially sample each port, by opening the corresponding one-way valve, discarding the first 1/2 Gal pumped, and starting with any filtered sample (to avoid blowing off the filter with N2 in the event that you run short of water from the port.)
9. After sampling is completed, close the N2 tank valve, open all the one-way valves, and bleed the N2 still remaining in the ports, by setting the three- way valve to the atmosphere.
10. Wait until the N2 has bled off; then disconnect the manifold from the well.
11. Wells TT and XX are exceptions to the above procedure. Both should not be scheduled to be sampled the same day. Both should be scheduled for purging first thing in the morning. The first purge stroke is the same as the other wells. After 15 minutes, P1 and P2 must be purged again. After 15 more minutes, P1 and P2 can be sampled. Then, move to sample another well, and return to well TT 1.5 hours later to purge P3 for the second time; move to another well again and return to well TT after other 1.5 hours to sample P3. For well XX, P3 must be sampled 7 hours after the (first and only) purging stroke.

Passive Diffusion Bag Procedures

Sampling and Analysis Plan Addendum
Bound Brook Facility
Wyeth Holdings Corporation

This document serves as an addendum to the Sampling and Analysis Plan (SAP) (O'Brien & Gere, October 2001) associated with the quarterly site-wide ground water monitoring program at the American Cyanamid Company (Cyanamid) Site in Bound Brook, New Jersey. This addendum provides sampling methods for use when collecting ground water samples for volatile organic compounds (VOCs) using passive diffusion bags (PDBs).

Background

The ground water monitoring program for the Cyanamid site includes site-wide ground water pumping and monitoring of site-wide wells, as well as the ground water monitoring requirements for the Impound 8 Resource Conservation and Recovery Act (RCRA) Facility. Elements of the October 2001 SAP were prepared in accordance with the Administrative Consent Order (ACO) between the American Cyanamid Company (Cyanamid) and the New Jersey Department of Environmental Protection (NJDEP), as amended in May 1994 (ACO Amendment). Wyeth Holdings Corporation (Wyeth) is now responsible for overseeing the monitoring program.

An element of the October 2001 SAP consisted of a description of monitoring well purging and sampling methods. One of the methods described included of the use of a peristaltic pump to purge and sample ground water from the following shallow overburden monitoring wells:

Impoundment 3, 4, and 5 wells: MW-2, MW-3, MW-5, MW-7, MW-9, and 28R

Impoundment 14 wells: 19R, 21-R, and O-R

Impoundment 17/18 wells (Group II): AAA, CCC-R, EEE-R, III, KKK, and 16 MW-2

Impoundment 19/24 wells: 32R, 34R, 36R, 38R, 41R, 42R, TFP-94-1R, and P24-91-1

During the first and third quarterly sampling events, ground water samples are collected from overburden monitoring wells as summarized on Table 1:

Table 1	Required Analyses				
Well I.D.	VOCs	SVOCs	TAL Metals	Cyanide	Phenols
AAA	X	X	X	X	X
CCC-R	X	X	X	X	X
EEE-R	X	X	X	X	X
16MW-2			X		

During the second and fourth quarterly sampling events, ground water samples are collected from overburden monitoring wells as summarized on Table 2:

Table 2	Required Analyses									
Well I.D.	VOCs	SVOCs	TAL Metals	Chlorides	Cyanide	Phenols	Arsenic	Cadmium	Chromium	Alpha & Beta, Radium 226 & 228
19-R	X	X								
21-R	X									
O-R	X									
AAA	X	X	X	X	X	X				
CCC-R	X	X	X	X	X	X				X
EEE-R	X	X	X	X	X	X				X
III	X	X	X	X						
KKK	X	X	X	X						X
16MW-2			X							
28R	X	X								
MW-2	X	X		X			X	X		
32R	X						X	X		
34R	X	X					X			
38R	X	X		X			X	X	X	
42R	X	X					X			
TFP-94-1R	X	X					X			

A comment regarding the use of peristaltic purge and sample methods to sample the overburden monitoring wells was received from NJDEP regarding the Fourth Quarter Ground Water Monitoring Report (O'Brien & Gere, January 2005). Specifically, the NJDEP comment indicated that the peristaltic purge method may result in significant loss of volatile organic compounds from samples before the analysis and that submersible purge method or any other comparable method shall be used.

In response to the NJDEP comment, Wyeth proposed the use of PDBs when collecting VOCs from the overburden monitoring wells to minimize the potential for loss of VOCs, and using peristaltic purge and sample methods for the remaining parameters. The sequence of sample collection from the overburden monitoring wells is described below.

Sequencing of sample collection from overburden monitoring wells

Step 1: Measure depth to water and record on the ground water sampling log and field logbook.

Step 2: Retrieve the PDB sampler and fill the appropriate sample containers for VOCs.

Step 3: Attach the peristaltic pump to the dedicated well tubing and proceed with purging and sampling in accordance with the SAP for the collection of required analytical parameters other than VOCs.

Step 4: When finished with sample collection, attach a new PDB sampler to the dedicated holder and reinstall in the well.

Step 5: Secure the well head.

The following describes the PDB installation and retrieval, and sample collection methods to be used when collecting VOCs from the overburden monitoring wells.

PDB installation and retrieval, and sample collection

Passive-Diffusion Bag Sampler Installation

Step 1: Don appropriate personal protective equipment (as required by the Health and Safety Plan).

Step 2: Place plastic sheeting around the well (optional, based on field conditions at the time of sampling).

Step 3: Clean the non-disposable, down-hole monitoring equipment (e.g., water-level probe).

Step 4: Measure and record the depth to water in the well on the ground water sampling log and in the field logbook. Check to make sure there is sufficient water column within the well so that the PDB will be fully submerged.

Step 5: Remove the PDB sampler from the shipping container.

Step 6: Attach the PDB sampler to the line of the well-specific passive bag harness using the stainless-steel snap hooks.

Step 7: Slowly lower the PDB sampler down the well and attach the harness to the top of the well using an S-hook. Check that the bottom stainless-steel weight just reaches the bottom of the well indicating that the sampler is properly positioned in the screened interval. The passive bag sampler will generally be placed at the midpoint of the saturated portion of the screened interval of the well. Table 3 provides a summary of the overburden well depths, screen lengths, and installation depths at which the PDBs should be placed within each well.

Table 3

Well I.D.	**Well Depth (ft BTOC)**	**Screen Length (ft)**	**Installation Height of Top of PDB Above Bottom of Well (ft)**
Impoundment 3, 4, & 5			
28R	18.1	5	3.5
MW-2	21.4	15	8.5
Impoundment 14			
19-R	11.9	5	3.5
21-R	22.5	5	3.5
O-R	17.4	5	3.5
Impoundment 15, 16, 17 & 18			
AAA	16.8	5	3.5
CCC-R	26.6	5	3.5
EEE-R	25.1	5	3.5
III	19.8	5	3.5
KKK	28.3	5	3.5
Lagoon 6&7 / Impoundment 19&24			
32R	20.8	5	3.5
34R	27.7	5	3.5
38R	26.7	5	3.5
42R	24.3	5	3.5
TFP-94-1R	20.0	8	5

Note: ft BTOC - feet below top of casing

Step 8: Close and lock the well.

Step 9: Record the date and time of placement of the PDB sampler in the well in the field logbook.

<u>Passive-Diffusion Bag Sampler Retrieval and Sample Collection</u>

Step 1: After the equilibration period, unlock and open the well. Slowly remove the PDB sampler from the monitoring well.

Step 2: Remove the PDB sampler from the stainless-steel snap hook and dry with a clean paper towel. Cut a small hole in the PDB sampler using a decontaminated knife or decontaminated stainless-steel scissors. Pour water from the PDB sampler directly into appropriate laboratory sample container for VOC analysis.

Step 3: Complete the sample label and place sample container in a cooler containing wet ice.

Step 4: Record the date and time of sample collection on the chain of custody and in the field logbook. In addition record in the field log, any pertinent observations of the sample (e.g., physical appearance, the presence of, or lack of, odors, sheens, etc.), and the values of the field indicator parameters, if measured.

Step 5: Attach a new PDB sampler to the dedicated harness and reinstall in the monitoring well after sampling activities are complete. Close and lock the monitoring well.

Appendix B

Field Sampling Logs

Second Half 2009
Groundwater Monitoring
Passive Diffusion Bag Specifications and Summary
Wyeth Holdings Corporation
Bound Brook Remediation Program

Well I.D.	Well Depth (ft BTOC)	Screen Length (ft)	Installation Height of Top of PDB Above Bottom of Well (ft)	Semi-annual Required	Deployment Date	WL Measured	Comment
Impoundment 3, 4, & 5							
28R	17.8	5	3.5	1/2	8/20/2009	4.63	
MW-2	21.1	15	3.3, 9.3	1/2	8/20/2009	9.54	2 bags installed
Impoundment 14							
19-R	11.6	5	3.5	1/2	8/20/2009	4.01	
21-R	22.6	5	3.5	1/2	8/20/2009	18.57	
O-R	17.9	5	3.5	1/2	8/20/2009	6.38	
Impoundment 15, 16, 17 & 18							
AAA	16.8	5	3.5	1/2	8/20/2009	6.21	
CCC-R	26.5	5	3.5	1/2	8/20/2009	17.21	2 bags installed*
EEE-R	25.1	5	3.5	1/2	8/20/2009	16.11	3 bags installed*
III	19.8	5	3.5	1/2	8/20/2009	5.46	
KKK	28.3	5	3.5	1/2	8/20/2009	15.66	
Lagoon 6&7 / Impoundment 19&24							
32R	20.4	5	3.5	1/2	8/20/2009	9.14	
34R	26.3	5	3.5	1/2	8/20/2009	17.08	
38R	25.6	5	3.5	1/2	8/20/2009	14.28	
42R	24.2	5	3.5	1/2	8/20/2009	13.69	
TFP-94-1R	19.1	8	5	1/2	8/20/2009	6.97	

Note:
ft BTOC - feet below top of casing
Water levels measured day of deployment of PDBs.
* - bags installed at the same depth for QC purposes

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: 28-R
4. Well Permit Number: NA

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ____
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 2.4
9. Total Well Depth (fbgs) 15.4
10. Screened interval/open hole (fbgs) 10.4 - 15.4
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1340
15. Depth to Ground Water Depth to ground water at time of deployment 4.63
16. Date and Time of Retrieval Date: 10-8-09 Time: 1230
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 3.67
18. Type of Deployment Line Used Diameter: 1/8" Material: 140#SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless Steel 8 oz. (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
15.3			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No**, this well is being profiled during this sampling round
    ☐ **Yes**, this well was profiled already. Date when well was profiled: ____
25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No**, flow testing has not been conducted in this well
    ☐ **Yes**, flow testing of this well was conducted. Date of testing: ____
    Type of flow meter used: ____
    Measurements taken every ____ feet **[Please Attach Results]**
26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Cool Wind Light Breeze ☐ Sunny ☐ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zambor	OBG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: MW-2
4. Well Permit Number: 25-33944-3

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 3.3
9. Total Well Depth (fbgs) 17.8
10. Screened interval/open hole (fbgs) 2.8 - 17.8
11. Well Casing: Diameter: 4 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1325
15. Depth to Ground Water Depth to ground water at time of deployment 9.54
16. Date and Time of Retrieval Date: 10-9-09 Time: 1418
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 9.63
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable coated with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
12.8	18.8		
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No,** this well is being profiled during this sampling round
    ☐ **Yes,** this well was profiled already. Date when well was profiled: ______
    Note: Two PDBs have been used for sampling the 15 ft screen interval
25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☒ **No,** flow testing has not been conducted in this well
    ☐ **Yes,** flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**
26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. mild Wind Lt. Breeze ☐ Sunny ☒ Overcast ☐ Raining ☐ Snowing
28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zamber	OBG
Ramesh Sadarangani	

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: 19-R
4. Well Permit Number: 25-31283-9

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 2.3
9. Total Well Depth (fbgs) 9.3
10. Screened interval/open hole (fbgs) 4.3 - 9.3
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1415
15. Depth to Ground Water Depth to ground water at time of deployment 4.01
16. Date and Time of Retrieval Date: 10-8-09 Time: 0830
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 4.08
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless Steel 8 oz. (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
9.1			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No,** this well is being profiled during this sampling round
    ☐ **Yes,** this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No,** flow testing has not been conducted in this well
    ☐ **Yes,** flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Cool Wind Lt. Breeze ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zambor	ORG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: 21-R
4. Well Permit Number: 25-31284-7

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 1.6
9. Total Well Depth (fbgs) 21.0
10. Screened interval/open hole (fbgs) 16.0 - 21.0
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1400
15. Depth to Ground Water Depth to ground water at time of deployment 18.57
16. Date and Time of Retrieval Date: 10-7-09 Time: 0815
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 18.50
18. Type of Deployment Line Used Diameter: 1/8" Material: 140#SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless Steel 8 oz. (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
20.1			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No**, this well is being profiled during this sampling round
    ☐ **Yes**, this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No**, flow testing has not been conducted in this well
    ☐ **Yes**, flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 88 Wind slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. mild Wind Breezy ☐ Sunny ☒ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zambor	OBG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: O - R
4. Well Permit Number: 25-22855

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 1.8
9. Total Well Depth (fbgs) 16.1
10. Screened interval/open hole (fbgs) 11.1 - 16.1
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1410
15. Depth to Ground Water Depth to ground water at time of deployment 6.38
16. Date and Time of Retrieval Date: 10-7-09 Time: 0830
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ 6.47 retrieval
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
15.4			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No**, this well is being profiled during this sampling round
    ☐ **Yes**, this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No**, flow testing has not been conducted in this well
    ☐ **Yes**, flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Cool Wind Lt. Breeze ☐ Sunny ☐ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zambor	OBG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: AAA
4. Well Permit Number: 25-24942-8

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 1.7
9. Total Well Depth (fbgs) 15.1
10. Screened interval/open hole (fbgs) 10.1 - 15.1
11. Well Casing: Diameter: 1.5 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 1.5 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1150
15. Depth to Ground Water Depth to ground water at time of deployment 6.21
16. Date and Time of Retrieval Date: 10-9-09 Time: 1044
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 6.36
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
14.3			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No,** this well is being profiled during this sampling round
    ☐ **Yes,** this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No,** flow testing has not been conducted in this well
    ☐ **Yes,** flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 87 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. mild Wind Lt. Breeze ☐ Sunny ☐ Overcast ☒ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes	OBG
Ramesh Sadarangani	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: CCC-R
4. Well Permit Number: 25-50084

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 2.4
9. Total Well Depth (fbgs) 24.11
10. Screened interval/open hole (fbgs) 19.1 - 24.1
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1140
15. Depth to Ground Water Depth to ground water at time of deployment 17.21
16. Date and Time of Retrieval Date: 10-9-09 Time: 1130
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ 17.57 retrieval
18. Type of Deployment Line Used. Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
24			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No**, this well is being profiled during this sampling round
    ☐ **Yes**, this well was profiled already. Date when well was profiled: ______
25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No**, flow testing has not been conducted in this well
    ☐ **Yes**, flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**
26. Weather Conditions During Deployment Temp. 87 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Mild Wind Light Breeze ☐ Sunny ☐ Overcast ☒ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes	ORG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: EEE-R
4. Well Permit Number: 25-31282-1

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. NOTE: PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 2.5
9. Total Well Depth (fbgs) 22.6
10. Screened interval/open hole (fbgs) 17.6 - 22.6
11. Well Casing: Diameter: 4 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1130
15. Depth to Ground Water Depth to ground water at time of deployment 16.4
16. Date and Time of Retrieval Date: 10-7-09 Time: 0900
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 16.54
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
22.6			
5th PDBS	6th PDBS	7th PDBS	8th PDBS

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ No, this well is being profiled during this sampling round
    ☐ Yes, this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ No, flow testing has not been conducted in this well
    ☐ Yes, flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 86 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Mild Wind Breezy ☐ Sunny ☒ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes	OBG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: III
4. Well Permit Number: 25-25027-2

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 1.8
9. Total Well Depth (fbgs) 18.0
10. Screened interval/open hole (fbgs) 13.0 - 18.0
11. Well Casing: Diameter: 1.5 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 1.5 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1100
15. Depth to Ground Water Depth to ground water at time of deployment 5.46
16. Date and Time of Retrieval Date: 10-9-09 Time: 1400
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 5.54
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz. (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
17.3			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No**, this well is being profiled during this sampling round
    ☐ **Yes**, this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No**, flow testing has not been conducted in this well
    ☐ **Yes**, flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 86 Wind slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Mild Wind Lt. Breeze ☐ Sunny ☒ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes	OBG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: KKK
4. Well Permit Number: 25-25029-9

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. NOTE: PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 4.3
9. Total Well Depth (fbgs) 24.1
10. Screened interval/open hole (fbgs) 19.1 - 24.1
11. Well Casing: Diameter: 1.5 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 1.5 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1110
15. Depth to Ground Water Depth to ground water at time of deployment 15.66
16. Date and Time of Retrieval Date: 10-9-09 Time: 1250
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 16.00
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
   ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
   ☐ Attached to bottom of deployment line and suspended in well
   ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
25.8			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
   ☐ No, this well is being profiled during this sampling round
   ☐ Yes, this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
   ☐ No, flow testing has not been conducted in this well
   ☐ Yes, flow testing of this well was conducted. Date of testing: ______
   Type of flow meter used: ______
   Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 86 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Mild Wind Lt. Breeze ☐ Sunny ☐ Overcast ☒ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes	ORG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: 32-R
4. Well Permit Number: 2533063-2

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 0.8
9. Total Well Depth (fbgs) 19.6
10. Screened interval/open hole (fbgs) 14.6 - 19.6
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size 0.010 inch

14. Date and Time of Deployment Date: 8-20-09 Time: 1305
15. Depth to Ground Water Depth to ground water at time of deployment 9.14
16. Date and Time of Retrieval Date: 10-7-09 Time: 0755
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 9.97
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz. (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
   ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
   ☐ Attached to bottom of deployment line and suspended in well
   ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
17.9			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
   ☐ **No,** this well is being profiled during this sampling round
   ☐ **Yes,** this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
   ☐ **No,** flow testing has not been conducted in this well
   ☐ **Yes,** flow testing of this well was conducted. Date of testing: ______
   Type of flow meter used: ______
   Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Mild Wind Breezy ☐ Sunny ☐ Overcast ☒ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zambor	ORG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: 34-R
4. Well Permit Number: 25-33062-4

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 1.5
9. Total Well Depth (fbgs) 24.8
10. Screened interval/open hole (fbgs) 19.8 - 24.8
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size 0.010 inch

14. Date and Time of Deployment Date: 8-20-09 Time: 1255
15. Depth to Ground Water Depth to ground water at time of deployment 17.08
16. Date and Time of Retrieval Date: 10-8-09 Time: 1407
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 18.24
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
23.8			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No**, this well is being profiled during this sampling round
    ☐ **Yes**, this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No**, flow testing has not been conducted in this well
    ☐ **Yes**, flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. cool Wind Lt. Breeze ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes/Casey Zambor	OBG
Ramesh Sadarangani	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: 38-R
4. Well Permit Number: 25-33064-1

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 1.8
9. Total Well Depth (fbgs) 23.8
10. Screened interval/open hole (fbgs) 18.8 - 23.8
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size 0.010 inch

14. Date and Time of Deployment Date: 8-20-09 Time: 1215
15. Depth to Ground Water Depth to ground water at time of deployment 14.28
16. Date and Time of Retrieval Date: 10-9-09 Time: 0812
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ 15.26 retrieval
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
23.1			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No,** this well is being profiled during this sampling round
    ☐ **Yes,** this well was profiled already. Date when well was profiled: ______

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No,** flow testing has not been conducted in this well
    ☐ **Yes,** flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 89 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Mild Wind Light Breeze ☐ Sunny ☐ Overcast ☒ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes	OBG
Ramesh Sadarangani	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: 42-R
4. Well Permit Number: 25-33066-7

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☐ Stick Up ☒ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 0.2
9. Total Well Depth (fbgs) 24.4
10. Screened interval/open hole (fbgs) 19.4 - 24.4
11. Well Casing: Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4-inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size 0.010 inch

14. Date and Time of Deployment Date: 8-20-09 Time: 1315
15. Depth to Ground Water Depth to ground water at time of deployment 13.69
16. Date and Time of Retrieval Date: 10-9-09 Time: 1554
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 14.44
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
21.7			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ No, this well is being profiled during this sampling round
    ☐ Yes, this well was profiled already. Date when well was profiled: ______
25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ No, flow testing has not been conducted in this well
    ☐ Yes, flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**
26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. Mild Wind Breezy ☐ Sunny ☐ Overcast ☒ Raining ☐ Snowing
28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zambor	OBG
Harold Meissner	Accutest

New Jersey Department of Environmental Protection
Checklist for the Submission of Sampling Data for Passive Diffusion Bag Samplers (PDBS)

1. Site: Former American Cyanamid
2. Location: Bound Brook, NJ
3. Well Designation: TFP-94-1R
4. Well Permit Number: 25-49039

5. Type of Well: ☒ Monitoring ☐ Extraction ☐ Residential ☐ Public Supply ☐ Irrigation ☐ Other
6. Well Surface Finish: ☒ Stick Up ☐ Flush Mount
7. Location of Measuring Point: ☒ Top of Casing ☐ Other (specify) ______
8. **NOTE:** PDBS represent a point sample within the screened interval or open hole of the well. It is critical to know the exact depth within the well where the PDBS is deployed. Well construction specifications, which are typically used to determine where to set the PDBS in the well, are measured in feet below ground surface (fbgs). If the depth interval for PDBS deployment is measured from the reference point identified above, the difference between this reference point and the ground surface must be measured and accounted for to determine the proper depth interval to set the PDBS. Please identify below, any differences between the measuring point identified above and actual ground surface at the well head.
   Distance between measuring point and ground surface (ft.) 1.1
9. Total Well Depth (fbgs) 18.0
10. Screened interval/open hole (fbgs) 10.0 - 18.0
11. Well Casing: Diameter: 4 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
12. Well Screen (or open hole diameter): Diameter: 4 inch Material: ☒ PVC ☐ Carbon Steel ☐ Stainless Steel
13. Screen Size (slot) Screen Slot Size NA

14. Date and Time of Deployment Date: 8-20-09 Time: 1245
15. Depth to Ground Water Depth to ground water at time of deployment 6.97
16. Date and Time of Retrieval Date: 10-8-09 Time: 1420
17. Depth to Ground Water Depth to ground water at time of ~~deployment~~ retrieval 7.48
18. Type of Deployment Line Used Diameter: 1/8" Material: 140# SS stranded cable with teflon

19. Material and Mass (oz.) of PDBS Weight Stainless steel 8 oz (stainless steel recommended)
20. Type of PDBS Used ☒ Lab Filled (Modified Trip Blank must be taken at time of deployment)
    ☐ Field Filled (Modified equipment blank of fill water must be taken at time of deployment. If PDBS isn't filled at well head, blank must travel with samplers until last sampler is deployed. Blank is then taken.)
21. Dimensions of PDBS Length (in.) 24 Diameter (in.) 1.25 Filled 220 mL
22. Position of PDBS Weight ☐ Attached to bottom of PDBS and suspended in well
    ☐ Attached to bottom of deployment line and suspended in well
    ☒ Attached to bottom of deployment line and resting on bottom of well (preferred)
23. Position of PDBS in Well Screen (ft. from measuring point to center of PDBS)

1st PDBS	2nd PDBS	3rd PDBS	4th PDBS
15.1			
5th PDBS	**6th PDBS**	**7th PDBS**	**8th PDBS**

24. If the saturated portion of the well screen or open hole is greater than 5 feet, has the well been vertically profiled to assess the potential for contaminant stratification?
    ☐ **No,** this well is being profiled during this sampling round
    ☐ **Yes,** this well was profiled already. Date when well was profiled: ______
    Note: One PDB is being used to monitor the 8 ft screen interval.

25. If the saturated portion of the well screen or open hole is greater than 10 feet, has the well been flow tested to assess the potential for vertical flow to be present within the well?
    ☐ **No,** flow testing has not been conducted in this well
    ☐ **Yes,** flow testing of this well was conducted. Date of testing: ______
    Type of flow meter used: ______
    Measurements taken every ______ feet **[Please Attach Results]**

26. Weather Conditions During Deployment Temp. 88 Wind Slight ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing
27. Weather Conditions During Retrieval Temp. warm Wind Lt. Breeze ☒ Sunny ☐ Overcast ☐ Raining ☐ Snowing

28. Field Sampling Technician: Name(s) and Company (please print clearly)

Name	Company
Jeff Wilkes / Casey Zambor	OBG
Harold Meissner	Accutest

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: ***Wyeth***

Well ID: **Well:** ***PW-2***

Location: ***A.H.P Boundbrook***

Well Depth: ______ ft.

Case Size: ______ inch

DTWTOC: ______ ft.

vol/ft: ______ gal/ft

Water Length: ______ ft.

Case Vol: ______ gal

Vol x 3 = ______ gal

Vol x 5 = ______ gal

**** Purge Monitoring ****

Purge Method: ______

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	Off Line						82.86		11:15
A.									
B.									
C.									
D.									
Post Purge									
Pre-Sample	On Line								
Sample	7.72	2062	16.1	6.46	Clear	22.80	~	~	15:20
Post Sample									

Purge End: ______

Pump: ______

Purge Start: ______

Bailer: N/A/

Purge Length: ______

Bailer Seal: N/A

Volume Purged: ______ gal

Purge Rate: ______ GPM

Weather: Clear, Warm, Still.

Sampling Technicians: *HM* ______ ______

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: *Wyeth*

Well ID: **Well:** *PW-3* Location: *A.H.P Boundbrook*

Well Depth: ______ ft. Case Size: ______ inch

DTWTOC: ______ ft. vol/ft: ______ gal/ft

Water Length: ______ ft. Case Vol: ______ gal

Vol x 3 = ______ gal Vol x 5 = ______ gal

**** Purge Monitoring ****

Purge Method: ______

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	Off Line						80.73		15:28
A.									
B.									
C.									
D.									
Post Purge									
Pre-Sample	On Line								
Sample	7.22	2036	15.1	7.86	Clear	37.70	~	~	11:05
Post Sample									

Purge End: ______ Pump: ______

Purge Start: ______ Bailer: N/A/

Purge Length: ______ Bailer Seal: N/A

Volume Purged: ______ gal Purge Rate: ______ GPM

Weather: Clear, Warm, Still.

Sampling Technicians: *HM*

Comments:

Wyeth Holding Corp
Monitoring Well Field Sheet

Date: 10/6/2009

Sampler: *Harold Meissner*

Flute ID: S S

Notes:

Purge Pressure: 110 PSI

Sample Pressure: 75 PSI

Max Pressure: 125 PSI

Discard Initial Gallon @ Sample Collection

	Port 1	Port 2	Port 3	Port 4
Purge Vol Req	4.2g	4.3g	4.6g	
Purge 1				
Time Start:	10:00	10:00	10:00	
Time End:	10:06	10:06	10:07	
Volume:	2.25	2.25	2.25	
Color:	*Clear*	*Clear*	*Clear*	
Purge 2				
Time Start:	10:22	10:22	10:22	
Time End:	10:28	10:28	10:29	
Volume:	2.25	2.25	2.25	
Color:	*Clear*	*Clear*	*Clear*	
Purge 3				
Time Start:			10:35	
Time End:			10:38	
Volume:			1.00	
Color:			*Clear*	
Total Volume	4.50g	4.50g	5.50g	
Sample				
Time Start:	11:35	11:35	11:48	

Weather: *Clear, Mild, lt. Breeze.*

Comments:

Wyeth Holding Corp
Monitoring Well Field Sheet

Date: 10/8/2009

Sampler: *Harold Meissner*

Flute ID: T T

Notes:

Purge Pressure: 110 PSI

Sample Pressure: 75 PSI

Max Pressure: 125 PSI

Discard Initial Gallon @ Sample Collection

Port 1	**Port 2**	**Port 3**	**Port 3**
Purge Vol Req 3.0 g	Purge Vol Req 3.0 g	Purge Vol Req 3.4 g	Purge Vol Req
Purge 1	**Purge 1**	**Purge 1**	**Purge 4**
Time Start: 7:40	Time Start: 7:40	Time Start: 7:40	Time Start: 12:00
Time End: 7:45	Time End: 7:45	Time End: 7:45	Time End: 12:05
Volume: 1.50	Volume: 1.50	Volume: 1.50	Volume: 0.75
Color: *Clear*	Color: *Clear*	Color: *Clear*	Color: *Clear*
Purge 2	**Purge 2**	**Purge 2**	**Purge 5**
Time Start: 8:00	Time Start: 8:00	Time Start: 9:35	Time Start: 13:40
Time End: 8:05	Time End: 8:05	Time End: 9:37	Time End: 13:42
Volume: 1.50	Volume: 1.50	Volume: 0.50	Volume: 0.50
Color: *Clear*	Color: *Clear*	Color: *Clear*	Color: *Clear*
Purge 3	**Purge 3**	**Purge 3**	
Time Start:	Time Start:	Time Start: 10:05	
Time End:	Time End:	Time End: 10:06	
Volume:	Volume:	Volume: 0.25	
Color:	Color:	Color: *Clear*	
Total Volume 3.0 g	Total Volume 3.0 g		Total Volume 3.50 g
Sample	**Sample**		**Sample**
Time Start: 9:50	Time Start: 9:55		Time Start: 15:50

Weather: *Clear, Cool, Still.*

Comments: *Perform MS/MSD sampling on YY P-1*

Perform Field Duplicate sampling on YY P-2

Due to low yield only evacuated 0.25gal prior top sampling

Wyeth Holding Corp
Monitoring Well Field Sheet

Date: 10/6/2009

Notes:

Purge Pressure: 110 PSI

Sampler: *Harold Meissner*

Sample Pressure: 75 PSI

Flute ID: W W

Max Pressure: 125 PSI

Discard Initial Gallon @ Sample Collection

	Port 1	**Port 2**	**Port 3**	**Port 4**
Purge Vol Req	4.5g	4.3g	4.2g	
Purge 1				
Time Start:	8:30	8:30	8:30	
Time End:	8:36	8:37	8:36	
Volume:	2.25	2.25	2.00	
Color:	*Clear*	*Clear*	*Clear*	
Purge 2				
Time Start:	8:53	8:53	8:53	
Time End:	8:59	8:59	9:00	
Volume:	2.25	2.25	2.00	
Color:	*Clear*	*Clear*	*Clear*	
Purge 3				
Time Start:			9:10	
Time End:			9:14	
Volume:			1.00	
Color:			*Clear*	
Total Volume	4.50g	4.50 g	5.00 g	
Sample				
Time Start:	9:16	9:18	9:30	

Weather: *Clear, Cold, I Still*

Comments: *Field Blank [09:00] via EPA method.*

Wyeth Holding Corp
Monitoring Well Field Sheet

Date: **10/6/2009**

Sampler: ***Harold Meissner***

Flute ID: **XX**

Notes:

Purge Pressure: 110 PSI
Sample Pressure: 75 PSI
Max Pressure: 125 PSI

Discard Initial Gallon @ Sample Collection

	Port 1	**Port 2**	**Port 3**	**Port 4**
Purge Vol Req	4.2g	3.9g	2 purge volumes	
Purge 1				
Time Start:	7:25	7:25	7:25	
Time End:	7:32	7:32	7:32	
Volume:	2.25	2.00	2.25	
Color:	*Clear*	*Clear*	*Clear*	
Purge 2				
Time Start:	7:48	7:48	16:10	
Time End:	7:54	7:54	16:17	
Volume:	2.25	2.00	2.25	
Color:	*Clear*	*Clear*	*Clear*	
Purge 3				
Time Start:				
Time End:				
Volume:				
Color:				
Total Volume	4.50 g	4.00 g	4.50 g	
Sample			**10/7/2009**	
Time Start:	8:12	8:14	7:30	

Weather: *Clear, Cool, Windy.*

Comments:

Port #3 Purged well on 10/06/09 Sample Well on 10/07/09

(r.12/09)

Wyeth Holding Corp
Monitoring Well Field Sheet

Date: 10/6/2009

Sampler: *Harold Meissner*

Flute ID: Y Y

Notes:

Purge Pressure: 110 PSI

Sample Pressure: 75 PSI

Max Pressure: 125 PSI

Discard Initial Gallon @ Sample Collection

	Port 1	Port 2	Port 3	Port 4
Purge Vol Req	4.5 g	4.3 g	4.5g	
Purge 1				
Time Start:	13:40	13:40	13:40	
Time End:	13:50	13:50	13:50	
Volume:	2.25	2.25	2.00	
Color:	*Clear*	*Clear*	*Clear*	
Purge 2				
Time Start:	14:05	14:05	14:05	
Time End:	14:14	14:15	14:14	
Volume:	2.25	2.25	2.00	
Color:	*lt Brown Tint*	*Clear*	*Clear*	
Purge 3				
Time Start:			14:25	
Time End:			14:29	
Volume:			1.00	
Color:			*Clear*	
Total Volume	4.50g	4.50g	5.00	
Sample				
Time Start:	14:32	14:34	14:48	

Weather: *Clear, Mild, E Windy.*

Comments: *Perform MS/MSD sampling on YY P-2*

Wyeth Holding Corp
Monitoring Well Field Sheet

Date: 10/6/2009

Sampler: *Harold Meissner*

Flute ID: Z Z

Notes:

Purge Pressure: 110 PSI
Sample Pressure: 75 PSI
Max Pressure: 125 PSI

Discard Initial Gallon @ Sample Collection

	Port 1	**Port 2**	**Port 3**	**Port 4**
Purge Vol Req	5.1 g	5.1 g	5.4 g	5.3 g
Purge 1				
Time Start:	11:55	11:55	11:55	11:55
Time End:	12:04	12:04	12:05	12:04
Volume:	2.50	2.75	2.50	2.50
Color:	*Clear*	*Clear*	*Clear*	*Clear*
Purge 2				
Time Start:	12:30	12:30	12:30	12:30
Time End:	12:39	12:39	12:39	12:39
Volume:	2.50	2.75	2.50	2.50
Color:	*Clear*	*Clear*	*Clear*	*Clear*
Purge 3				
Time Start:	12:50		12:50	12:50
Time End:	12:54		12:54	12:54
Volume:	1.00		1.00	1.00
Color:	*Clear*		*Clear*	*Clear*
Total Volume	6.0 g	5.5 g	6.0 g	6.0 g
Sample				
Time Start:	13:18	13:00	13:12	13:14

Weather: *Clear, Mild, lt. Breeze.*
Comments:

(R.01/04)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/8/2009*

Client: ***Wyeth***

Well ID: **Well:** ***TFP-94-1R*** **Location:** ***A.H.P Boundbrook***

Well Depth:	**19.10**	**ft.**	**Case Size:**	**4.0**	**inch**
DTWTOC:	**7.48**	**ft.**	**vol/ft:**	**0.65**	**gal/ft**
Water Length:	**11.62**	**ft.**	**Case Vol:**	**7.55**	**gal**
Vol x 3 =	**22.65**	**gal**	**Vol x 5 =**	**37.75**	**gal**

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.34	1041	16.1	1.77	Clear	3.31	7.55	0.0	14:30
A.	7.42	1062	15.0	1.03	Clear	2.62		8.0	14:38
B.	7.44	1063	15.5	0.88	Clear	2.86		16.0	14:46
C.									
D.									
Post Purge	7.46	1070	15.5	1.07	Clear	1.72	7.67	24.0	14:54
Pre-Sample		"	"	"	"	"	"	"	"
Sample								28.00	14:58
Post Sample	7.48	1060	15.5	0.94	Clear	1.90	7.68	32.00	15:02

Purge End:	**14:54**		**Pump:**	**Isco-94**
Purge Start:	**14:30**		**Bailer:**	**N/A/**
Purge Length:	**24**		**Bailer Seal:**	**N/A**
Volume Purged:	**24.00**	**gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Warm, lt. Breeze.

Sampling Technicians: ***HM***

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/8/2009*

Client: ***Wyeth***

Well ID: **Well:** ***19R***

Location: ***A.H.P Boundbrook***

Well Depth:	11.60	ft.	Case Size:	4.0	inch
DTWTOC:	4.08	ft.	vol/ft:	0.65	gal/ft
Water Length:	7.52	ft.	Case Vol:	4.89	gal
Vol x 3 =	14.67	gal	Vol x 5 =	24.45	gal

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.13	282	17.2	2.19	Clear	19.40	4.08	0.0	8:40
A.	7.15	292	18.4	2.05	Clear	26.20		5.0	8:52
B.	7.10	291	19.0	1.49	Clear	30.30		10.0	9:05
C.									
D.									
Post Purge	7.17	294	19.1	1.62	S-Clear	42.90	6.43	15.2	9:18
Pre-Sample		"	"	"	"	"	"	"	"
Sample								16.00	9:20
Post Sample	7.17	292	19.0	1.94	S-Clear	59.80	7.04	21.00	9:25

Purge End:	9:18	Pump:	Isco-94
Purge Start:	8:40	Bailer:	N/A/
Purge Length:	38	Bailer Seal:	N/A
Volume Purged:	15.20 gal	Purge Rate:	0.40 GPM

Weather: Clear, Cool, lt.Breeze.

Sampling Technicians: *HM*

Comments: *Tarlike Substance on casing & Tubing.*
Field Blank [08:15] via bladder used on 19R

(r.12/09)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/8/2009*

Client: *Wyeth*

Well ID: **Well:** *28R*   **Location:** *A.H.P Boundbrook*

Well Depth: 17.80 ft.   **Case Size:** 4.0 inch

DTWTOC: 3.67 ft.   **vol/ft:** 0.65 gal/ft

Water Length: 14.13 ft.   **Case Vol:** 9.18 gal

Vol x 3 = 27.54 gal   **Vol x 5 =** 45.90 gal

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.10	1530	16.0	2.18	Clear	14.20	3.67	0.0	12:40
A.	6.06	1522	15.5	2.21	Clear	9.20		9.5	12:52
B.	6.04	1510	15.6	2.20	Clear	8.40		19.5	13:04
C.									
D.									
Post Purge	6.01	1330	15.7	1.53	Clear	7.40	4.24	28.0	13:15
Pre-Sample		"	"	"	"	"	"	"	"
Sample								32.00	13:20
Post Sample	6.01	1330	15.8	1.36	Clear	7.90	4.21	36.00	13:25

Purge End: 13:15   **Pump:** Isco-94

Purge Start: 12:40   **Bailer:** N/A/

Purge Length: 35   **Bailer Seal:** N/A

Volume Purged: 28.00 gal   **Purge Rate:** 0.80 GPM

Weather: Clear, Cool, Breezy.

Sampling Technicians: *HM*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/8/2009*

Client: *Wyeth*

Well ID: **Well:** *34R* Location: *A.H.P Boundbrook*

Well Depth:	26.30	ft.	Case Size:	4.0	inch
DTWTOC:	18.24	ft.	vol/ft:	0.65	gal/ft
Water Length:	8.06	ft.	Case Vol:	5.24	gal
Vol x 3 =	15.72	gal	Vol x 5 =	26.20	gal

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.93	720	15.5	3.23	Clear	3.45	18.24	0.00	14:18
A.	6.91	705	14.8	3.96	Clear	7.67		5.40	14:54
B.	6.95	709	14.8	4.92	Clear	2.71		9.90	15:29
C.									
D.									
Post Purge	6.98	704	14.6	5.05	Clear	2.84	19.55	16.05	16:10
Pre-Sample		"	"	"	"	"	"	"	"
Sample								16.80	16:15
Post Sample	6.96	700	14.3	4.96	Clear	2.05	19.54	17.55	16:20

Purge End: 14:55 16:10 (*) Pump: Solnist-04

Purge Start: 14:18 15:00 (*) Bailer: N/A/

Purge Length: 37 / 70 = 107 min Bailer Seal: N/A

Volume Purged: 16.05 gal Purge Rate: 0.15 GPM

Weather: Clear, Cool, Breezy.

Sampling Technicians: *RS*

Comments: *(*) Pump down from 14:55 to 15:00*

(r. 12/28)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** ***38R**** **Location:** ***A.H.P Boundbrook***

Well Depth:	**25.60**	**ft.**	**Case Size:**	**4.0**	**inch**
DTWTOC:	**15.31**	**ft.**	**vol/ft:**	**0.65**	**gal/ft**
Water Length:	**10.29**	**ft.**	**Case Vol:**	**6.69**	**gal**
Vol x 3 =	**20.07**	**gal**	**Vol x 5 =**	**33.45**	**gal**

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.16	423	14.0	2.51	lt Black	3.96	15.31	0.00	8:54
A.	6.32	365	13.7	2.18	S-Clear	2.40		4.95	9:09
B.	6.33	342	13.7	1.71	S-Clear	1.70		9.90	9:24
C.	6.32	332	13.8	1.69	S-Clear	1.73		15.18	9:40
D.									
Post Purge	6.35	329	13.8	2.02	S-Clear	1.67	16.28	21.12	9:58
Pre-Sample		"	"	"	"	"	"	"	"
Sample								21.78	10:00
Post Sample	6.33	328	13.8	2.07	S-Clear	1.75	16.30	23.43	10:05

Purge End:	**9:58**		**Pump:**	**Solnist -04**
Purge Start:	**8:54**		**Bailer:**	**N/A/**
Purge Length:	**64**		**Bailer Seal:**	**N/A**
Volume Purged:	**21.12**	**gal**	**Purge Rate:**	**0.33** GPM

Weather: Lt, Rain, Mild, Lt Breeze

Sampling Technicians: ***RS***

Comments: *Black tarlike substance had tubung clogged. Replaced tubing.*

(r. 12/28)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** *42R*

Location: *A.H.P Boundbrook*

Well Depth:	24.20	ft.	Case Size:	4.0	inch
DTWTOC:	14.50	ft.	vol/ft:	0.65	gal/ft
Water Length:	9.70	ft.	Case Vol:	6.30	gal
Vol x 3 =	18.90	gal	Vol x 5 =	31.50	gal

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.77	620	17.4	2.18	lt Br	77.10	14.50	0.0	16:05
A.	6.79	756	17.0	3.11	lt Br	17.10		7.0	16:28
B.	6.75	767	16.9	3.05	lt Br	17.20		14.0	16:52
C.									
D.									
Post Purge	6.77	765	16.6	2.78	lt Br	15.80	17.30	21.0	17:15
Pre-Sample		"	"	"	"	"	"	"	"
Sample								22.50	17:20
Post Sample	6.74	768	16.5	2.13	lt Br	23.30	17.30	23.00	17:25

Purge End:	17:15		Pump:	Solnist -04
Purge Start:	16:05		Bailer:	N/A/
Purge Length:	70		Bailer Seal:	N/A
Volume Purged:	21.00	gal	Purge Rate:	0.30 GPM

Weather: Lt, Rain, Mild, Lt Breeze

Sampling Technicians: *RS*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** ***16-MW-2***

Location: ***A.H.P Boundbrook***

Well Depth:	16.10	ft.	Case Size:	4.0	inch
DTWTOC:	5.38	ft.	vol/ft:	0.65	gal/ft
Water Length:	10.72	ft.	Case Vol:	6.97	gal
Vol x 3 =	20.91	gal	Vol x 5 =	34.85	gal

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.59	544	17.1	2.69	Clear	9.60	5.38	0.0	12:02
A.	6.68	560	16.8	1.83	Clear	16.50		7.2	12:20
B.	6.64	566	17.1	2.47	Clear	22.90		14.4	12:38
C.									
D.									
Post Purge	6.61	561	17.0	2.87	Clear	19.90	5.48	21.6	12:56
Pre-Sample		"	"	"	"	"	"	"	"
Sample								22.80	12:59
Post Sample	6.62	560	17.0	2.51	Clear	17.10	5.45	23.20	13:00

Purge End:	12:56	Pump:	Solnist-04
Purge Start:	12:02	Bailer:	N/A/
Purge Length:	54	Bailer Seal:	N/A
Volume Purged:	21.60 gal	Purge Rate:	0.400 GPM

Weather: Overcast, Humid, Mild, Lt Breeze.

Sampling Technicians: *RS*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** *MW-2*

Location: ***A.H.P Boundbrook***

Well Depth:	21.10	ft.	**Case Size:**	4.0	inch
DTWTOC:	9.77	ft.	**vol/ft:**	0.65	gal/ft
Water Length:	11.33	ft.	**Case Vol:**	7.36	gal
Vol x 3 =	22.08	gal	**Vol x 5 =**	36.80	gal

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	8.59	2795	18.1	1.22	Green	313.00	9.77	0.0	14:30
A.	8.60	2872	18.5	1.53	Green	244.00		8.4	14:51
B.	8.64	2792	16.7	2.17	Green	803.00		16.4	15:11
C.									
D.									
Post Purge	8.60	2842	17.2	2.37	Green	203.00	18.13	24.8	15:32
Pre-Sample		"	"	"	"	"	"	"	"
Sample								26.00	15:35
Post Sample	8.61	2850	17.3	2.35	Green	54.50	17.78	27.50	15:38

Purge End:	15:32	**Pump:**	Solnist-04
Purge Start:	14:30	**Bailer:**	N/A/
Purge Length:	62	**Bailer Seal:**	N/A
Volume Purged:	24.80 gal	**Purge Rate:**	0.400 GPM

Weather: Overcast, Humid, Mild, Lt Breeze.

Sampling Technicians: *RS*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** ***AAA***

Location: ***A.H.P Boundbrook***

Well Depth:	**16.80**	**ft.**		**Case Size:**	**1.5**	**inch**
DTWTOC:	**6.35**	**ft.**		**vol/ft:**	**0.09**	**gal/ft**
Water Length:	**10.45**	**ft.**		**Case Vol:**	**0.94**	**gal**
Vol x 3 =	**2.82**	**gal**		**Vol x 5 =**	**4.70**	**gal**

**** *Purge Monitoring* ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.52	563	15.0	1.51	lt Br	101.00	6.35	0.00	11:00
A.	6.55	573	14.8	1.65	S-Clear	15.20		0.99	11:03
B.	6.56	573	14.6	1.69	S-Clear	7.91		1.98	11:06
C.									
D.									
Post Purge	6.57	576	14.8	1.29	S-Clear	5.25	6.41	2.97	11:09
Pre-Sample		"	"	"	"	"	"	"	"
Sample								3.33	11:10
Post Sample	6.56	578	15.0	1.30	S-Clear	3.06	6.36	4.95	11:15

Purge End:	**11:09**		**Pump:**	**Solnist -04**
Purge Start:	**11:00**		**Bailer:**	**N/A/**
Purge Length:	**9**		**Bailer Seal:**	**N/A**
Volume Purged:	**2.97**	**gal**	**Purge Rate:**	**0.33** GPM

Weather: Lt, Rain, Mild, Lt Breeze

Sampling Technicians: ***RS***

Comments:

(r.12/09)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** *I I I*

Location: ***A.H.P Boundbrook***

Well Depth:	**19.80**	**ft.**	**Case Size:**	**1.5**	**inch**
DTWTOC:	**5.54**	**ft.**	**vol/ft:**	**0.09**	**gal/ft**
Water Length:	**14.26**	**ft.**	**Case Vol:**	**1.28**	**gal**
Vol x 3 =	**3.84**	**gal**	**Vol x 5 =**	**6.40**	**gal**

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.41	593	15.1	8.99	Brown	> 500	5.54	0.0	14:15
A.	6.34	604	14.4	1.07	Clear	11.80		1.5	14:21
B.	6.33	601	14.3	0.94	Clear	11.80		3.0	14:27
C.						10.20			
D.									
Post Purge	6.34	600	14.2	0.79	Clear	5.70	5.70	4.5	14:40
Pre-Sample		"	"	"	"	"	"	"	"
Sample								5.40	14:45
Post Sample	6.34	604	14.3	0.86	Clear	5.72	5.72	6.30	14:50

Purge End:	**14:15**	**Pump:**	**Isco-94**
Purge Start:	**14:40**	**Bailer:**	**N/A/**
Purge Length:	**25**	**Bailer Seal:**	**N/A**
Volume Purged:	**4.50** **gal**	**Purge Rate:**	**0.180** GPM

Weather: Overcast, Humid, Mild, Lt Breeze.

Sampling Technicians: *HM*

Comments:

(r. 12/09)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** ***KKK***

Location: ***A.H.P Boundbrook***

Well Depth:	**28.30**	**ft.**	**Case Size:**	**1.5**	**inch**
DTWTOC:	**16.00**	**ft.**	**vol/ft:**	**0.09**	**gal/ft**
Water Length:	**12.30**	**ft.**	**Case Vol:**	**1.11**	**gal**
Vol x 3 =	**3.33**	**gal**	**Vol x 5 =**	**5.55**	**gal**

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.02	352	14.8	3.40	Clear	11.40	16.00	0.0	13:08
A.	5.98	308	13.5	2.15	Clear	10.10		1.2	13:08
B.	5.91	296	13.4	1.87	Clear	9.43		2.4	13:11
C.									
D.									
Post Purge	5.90	294	13.0	1.01	Clear	8.82	16.66	3.6	13:14
Pre-Sample		"	"	"	"	"	"	"	"
Sample								6.00	13:20
Post Sample	5.88	292	13.2	1.07	Clear	9.14	16.67	9.20	13:28

Purge End:	**13:14**	**Pump:**	**Isco-94**
Purge Start:	**13:05**	**Bailer:**	**N/A/**
Purge Length:	**9**	**Bailer Seal:**	**N/A**
Volume Purged:	**3.60** **gal**	**Purge Rate:**	**0.40** GPM

Weather: Lt, Rain, Mild, Lt Breeze

Sampling Technicians: *HM*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** ***CCC-R*** **Location:** ***A.H.P Boundbrook***

Well Depth:	**26.50**	**ft.**	**Case Size:**	**4.0**	**inch**
DTWTOC:	**17.57**	**ft.**	**vol/ft:**	**0.65**	**gal/ft**
Water Length:	**8.93**	**ft.**	**Case Vol:**	**5.80**	**gal**
Vol x 3 =	**17.40**	**gal**	**Vol x 5 =**	**29.00**	**gal**

**** *Purge Monitoring* ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.29	738	13.9	3.11	Clear	4.16	17.57	0.0	11:35
A.	6.32	831	13.1	2.58	Clear	3.05		6.0	11:47
B.	6.32	836	13.0	1.93	Clear	3.21		12.0	11:59
C.									
D.									
Post Purge	6.30	838	12.8	1.87	Clear	3.27	18.04	18.0	12:11
Pre-Sample		"	"	"	"	"	"	"	"
Sample								20.00	12:15
Post Sample	6.30	855	12.9	1.76	Clear	3.11	18.03	25.00	12:35

Purge End:	**12:11**	**Pump:**	**Envirent Solnist**
Purge Start:	**11:35**	**Bailer:**	**N/A/**
Purge Length:	**36**	**Bailer Seal:**	**N/A**
Volume Purged:	**18.00** **gal**	**Purge Rate:**	**0.50** GPM

Weather: Rain, Mild, Lt Breeze

Sampling Technicians: ***HM***

Comments: *Perform Field Duplicate Sampling on CCC-R*

(r.12/09)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/9/2009*

Client: ***Wyeth***

Well ID: **Well:** ***EEE-R***

Location: ***A.H.P Boundbrook***

Well Depth:	**25.10**	**ft.**	**Case Size:**	**4.0**	**inch**
DTWTOC:	**16.54**	**ft.**	**vol/ft:**	**0.65**	**gal/ft**
Water Length:	**8.56**	**ft.**	**Case Vol:**	**5.56**	**gal**
Vol x 3 =	**16.68**	**gal**	**Vol x 5 =**	**27.80**	**gal**

**** Purge Monitoring ****

Purge Method: Peristalic

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.51	763	14.4	3.35	Clear	6.21	15.59	0.0	9:50
A.	6.45	733	13.5	2.40	Clear	3.63		10.0	10:03
B.	6.50	702	13.4	2.84	Clear	4.08		20.0	10:17
C.									
D.									
Post Purge	6.51	608	13.8	2.89	Clear	3.48	16.67	30.0	10:30
Pre-Sample		"	"	"	"	"	"	"	"
Sample								33.75	10:35
Post Sample	6.64	710	14.0	3.28	Clear	3.96	16.68		11:05

Purge End:	**10:30**	**Pump:**	**Envirent Solnist**
Purge Start:	**9:50**	**Bailer:**	**N/A/**
Purge Length:	**40**	**Bailer Seal:**	**N/A**
Volume Purged:	**30.00** **gal**	**Purge Rate:**	**0.75** GPM

Weather: Overcast, Mild, Light rain earlier, Lt Breeze

Sampling Technicians: ***HM***

Comments: *Perform MS/MSD sampling on EEE-R*

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D1***

Location: ***A.H.P Boundbrook***

Well Depth:	**71.70**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**39.30**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**32.40**	**ft.**	**Case Vol:**	**47.63**	**gal**
Vol x 3 =	**142.89**	**gal**	**Vol x 5 =**	**238.15**	**gal**

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.70	571	14.6	7.03	Clear	3.77	39.30	0.0	13:10
A.	7.58	668	14.8	6.24	Clear	4.75		50.0	14:00
B.	7.54	714	14.5	5.06	Clear	2.56		100.0	14:50
C.									
D.									
Post Purge	7.58	677	14.1	4.71	Clear	2.38	40.68	150.0	15:40
Pre-Sample		"	"	"	"	"	"	"	"
Sample								155.00	15:45
Post Sample	7.57	692	14.1	3.53	Clear	3.11	41.02	157.00	15:47

Purge End:	**15:40**	**Pump:**	**Dedicated Bladder**
Purge Start:	**13:10**	**Bailer:**	**N/A/**
Purge Length:	**150**	**Bailer Seal:**	**N/A**
Volume Purged:	**150.00** **gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Warm, Still.

Sampling Technicians: ***GB***

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/7/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D2***

Location: ***A.H.P Boundbrook***

Well Depth:	**81.40**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**37.28**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**44.12**	**ft.**	**Case Vol:**	**64.86**	**gal**
Vol x 3 =	**194.58**	**gal**	**Vol x 5 =**	**324.30**	**gal**

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.32	689	14.7	4.16	Clear	1.96	37.28	0.0	11:58
A.	7.34	768	14.3	3.61	Clear	1.16	37.78	40.0	13:08
B.	7.33	798	14.2	5.02	Clear	1.45	37.58	140.0	14:18
C.									
D.									
Post Purge	7.32	719	14.1	3.86	Clear	1.08	38.14	210.0	15:28
Pre-Sample		"	"	"	"	"	"	"	"
Sample								212.00	15:30
Post Sample	7.33	721	14.0	3.58	Clear	6.77	38.73	214.00	15:32

Purge End:	**15:28**		**Pump:**	**Dedicated Bladder**
Purge Start:	**11:58**		**Bailer:**	**N/A/**
Purge Length:	**210**		**Bailer Seal:**	**N/A**
Volume Purged:	**210.00**	**gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Warm, Windy.

Sampling Technicians: ***GB***

Comments:

(r.12/09)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/7/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D3*** Location: ***A.H.P Boundbrook***

Well Depth:	**75.70**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**35.86**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**39.84**	**ft.**	**Case Vol:**	**58.56**	**gal**
Vol x 3 =	**175.68**	**gal**	**Vol x 5 =**	**292.80**	**gal**

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.08	637	14.4	3.90	Clear	3.32	35.86	0.0	12:11
A.	7.31	760	14.2	3.25	Clear	2.16		60.0	13:11
B.	7.37	659	14.0	3.35	Clear	1.10		120.0	14:11
C.									
D.									
Post Purge	7.32	770	14.2	3.33	Clear	1.83	36.33	180.0	15:11
Pre-Sample		"	"	"	"	"	"	"	"
Sample								184.00	15:15
Post Sample	7.28	765	13.9	3.01	Clear	1.63	36.20	186.00	15:17

Purge End:	**15:11**	**Pump:**	**Dedicated Bladder**
Purge Start:	**12:11**	**Bailer:**	**N/A/**
Purge Length:	**180**	**Bailer Seal:**	**N/A**
Volume Purged:	**180.00 gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Warm, Windy.

Sampling Technicians: *GB*

Comments:

(r.12/09)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/7/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D4***   Location: ***A.H.P Boundbrook***

Well Depth:	83.80	ft.	Case Size:	6.0	inch
DTWTOC:	35.40	ft.	vol/ft:	1.47	gal/ft
Water Length:	48.40	ft.	Case Vol:	71.15	gal
Vol x 3 =	213.45	gal	Vol x 5 =	355.75	gal

**** *Purge Monitoring* ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.54	568	14.8	9.51	Clear	1.17	35.40	0.0	11:45
A.	7.31	608	14.1	3.98	Clear	2.95		72.0	12:57
B.	7.36	628	14.2	3.95	Clear	2.32		144.0	14:09
C.									
D.									
Post Purge	7.29	622	13.2	3.82	Clear	1.46	36.22	216.0	15:21
Pre-Sample		"	"	"	"	"	"	"	"
Sample								220.00	15:25
Post Sample	7.30	613	13.8	3.74	Clear	1.06	36.23	222.00	15:27

Purge End:	15:21		Pump:	Dedicated Bladder
Purge Start:	11:45		Bailer:	N/A/
Purge Length:	216		Bailer Seal:	N/A
Volume Purged:	216.00	gal	Purge Rate:	1.00 GPM

Weather: Clear, Warm, Windy.

Sampling Technicians: *GB*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/7/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D4***

Location: ***A.H.P Boundbrook***

Well Depth:	**83.80**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**35.40**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**48.40**	**ft.**	**Case Vol:**	**71.15**	**gal**
Vol x 3 =	**213.45**	**gal**	**Vol x 5 =**	**355.75**	**gal**

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.54	568	14.8	9.51	Clear	1.17	35.40	0.0	11:45
A.	7.31	608	14.1	3.98	Clear	2.95		72.0	12:57
B.	7.36	628	14.2	3.95	Clear	2.32		144.0	14:09
C.									
D.									
Post Purge	7.29	622	13.2	3.82	Clear	1.46	36.22	216.0	15:21
Pre-Sample		"	"	"	"	"	"	"	"
Sample								220.00	15:25
Post Sample	7.30	613	13.8	3.74	Clear	1.06	36.23	222.00	15:27

Purge End:	**15:21**	**Pump:**	**Dedicated Bladder**
Purge Start:	**11:45**	**Bailer:**	**N/A/**
Purge Length:	**216**	**Bailer Seal:**	**N/A**
Volume Purged:	**216.00** **gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Warm, Windy.

Sampling Technicians: *GB*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/7/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D5***

Location: ***A.H.P Boundbrook***

Well Depth:	**59.30**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**35.67**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**23.63**	**ft.**	**Case Vol:**	**34.74**	**gal**
Vol x 3 =	**104.22**	**gal**	**Vol x 5 =**	**173.70**	**gal**

**** *Purge Monitoring* ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.06	914	15.1	5.57	Clear	2.99	35.67	0.0	9:31
A.	7.11	813	14.6	5.14	Clear	1.60		37.0	10:08
B.	6.91	812	15.1	5.33	Clear	1.46		74.0	10:45
C.									
D.									
Post Purge	6.95	821	14.9	4.80	Clear	1.16	36.73	111.0	11:22
Pre-Sample		"	"	"	"	"	"	"	"
Sample								114.00	11:25
Post Sample	7.09	807	14.4	3.58	Clear	1.27	36.82	116.00	11:27

Purge End:	**11:22**		**Pump:**	**Dedicated Bladder**
Purge Start:	**9:31**		**Bailer:**	**N/A/**
Purge Length:	**111**		**Bailer Seal:**	**N/A**
Volume Purged:	**111.00**	**gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Warm, Windy.

Sampling Technicians: *GB*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/7/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D6*** Location: ***A.H.P Boundbrook***

Well Depth:	58.70	ft.	Case Size:	6.0	inch
DTWTOC:	31.26	ft.	vol/ft:	1.47	gal/ft
Water Length:	27.44	ft.	Case Vol:	40.34	gal
Vol x 3 =	121.02	gal	Vol x 5 =	201.70	gal

**** *Purge Monitoring* ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.91	1587	15.4	7.87	Clear	5.21	31.26	0.0	9:24
A.	7.03	1393	14.5	7.12	Clear	2.94		42.0	10:06
B.	7.03	1384	15.0	5.63	Clear	2.85		84.0	10:48
C.									
D.									
Post Purge	6.99	1328	14.3	3.47	Clear	1.58	34.39	126.0	11:30
Pre-Sample		"	"	"	"	"	"	"	"
Sample								131.00	11:35
Post Sample	7.01	1342	14.3	3.49	Clear	1.47	34.82	133.00	11:37

Purge End:	11:30		Pump:	Dedicated Bladder
Purge Start:	9:24		Bailer:	N/A/
Purge Length:	126		Bailer Seal:	N/A
Volume Purged:	126.00	gal	Purge Rate:	1.00 GPM

Weather: Clear, Cool, Windy.

Sampling Technicians: *GB*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/7/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D7*** Location: ***A.H.P Boundbrook***

Well Depth:	66.20	ft.	Case Size:	6.0	inch
DTWTOC:	29.36	ft.	vol/ft:	1.47	gal/ft
Water Length:	36.84	ft.	Case Vol:	54.15	gal
Vol x 3 =	162.45	gal	Vol x 5 =	270.75	gal

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.32	1291	15.7	5.35	Clear	19.80	29.36	0.0	9:16
A.	6.41	1068	14.9	5.02	Clear	5.09		55.0	10:11
B.	6.41	1103	14.9	4.43	Clear	3.26		110.0	11:06
C.									
D.									
Post Purge	6.43	1086	14.5	2.39	Clear	3.07	32.04	165.0	12:01
Pre-Sample		"	"	"	"	"	"	"	"
Sample								131.00	12:05
Post Sample	6.38	1096	14.3	2.47	Clear	3.3.9	32.07	133.00	12:07

Purge End:	12:01	Pump:	Dedicated Bladder
Purge Start:	9:16	Bailer:	N/A/
Purge Length:	165	Bailer Seal:	N/A
Volume Purged:	165.00 gal	Purge Rate:	1.00 GPM

Weather: Clear, Cool, Windy.

Sampling Technicians: *GB*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/8/2009*

Client: *Wyeth*

Well ID: **Well:** *RCRA-D8*

Location: *A.H.P Boundbrook*

Well Depth:	62.90	ft.	Case Size:	6.0	inch
DTWTOC:	32.57	ft.	vol/ft:	1.47	gal/ft
Water Length:	30.33	ft.	Case Vol:	44.58	gal
Vol x 3 =	133.74	gal	Vol x 5 =	222.90	gal

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.84	256	14.1	2.15	Clear	16.10	32.57	0.0	7:55
A.	7.21	484	14.0	2.46	Clear	3.23		60.0	8:55
B.	7.17	465	14.3	2.09	Clear	2.55		120.0	9:55
C.									
D.									
Post Purge	7.26	493	14.2	1.20	Clear	2.80	33.72	150.0	10:25
Pre-Sample		"	"	"	"	"	"	"	"
Sample								155.00	10:30
Post Sample	7.23	493	14.1	2.17	Clear	1.84	33.72	160.00	10:35

Purge End:	10:25		Pump:	Dedicated Bladder
Purge Start:	7:55		Bailer:	N/A/
Purge Length:	150		Bailer Seal:	N/A
Volume Purged:	150.00	gal	Purge Rate:	1.00 GPM

Weather: Clear, Cool, Still.

Sampling Technicians: *RS*

Comments: *Preform Field Duplicate*

ACCUTEST

Monitoring Well Field Sheet

Date: *10/8/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D9***

Location: ***A.H.P Boundbrook***

Well Depth:	**87.70**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**23.95**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**63.75**	**ft.**	**Case Vol:**	**93.71**	**gal**
Vol x 3 =	**281.13**	**gal**	**Vol x 5 =**	**468.55**	**gal**

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.80	588	13.9	2.12	Clear	3.44	23.95	0.0	8:10
A.	6.96	558	14.1	2.36	Clear	10.90		100.0	9:50
B.	7.00	575	14.1	2.96	Clear	3.40		200.0	11:30
C.	6.99	579	14.6	3.11	Clear	2.67		260.0	12:30
D.									
Post Purge	6.98	587	14.9	2.66	Clear	2.46	44.25	300.0	13:10
Pre-Sample		"	"	"	"	"	"	"	"
Sample								305.00	13:15
Post Sample	6.97	571	14.3	2.76	Clear	2.80	44.08	310.00	13:20

Purge End:	**13:10**		**Pump:**	**Dedicated Bladder**
Purge Start:	**8:10**		**Bailer:**	**N/A/**
Purge Length:	**300**		**Bailer Seal:**	**N/A**
Volume Purged:	**300.00**	**gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Cool, Still.

Sampling Technicians: ***R.S.***

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/8/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D10*** Location: ***A.H.P Boundbrook***

Well Depth: 72.40 ft. **Case Size:** 6.0 inch

DTWTOC: 37.92 ft. **vol/ft:** 1.47 gal/ft

Water Length: 34.48 ft. **Case Vol:** 50.69 gal

Vol x 3 = 152.07 gal **Vol x 5 =** 253.45 gal

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.33	438	14.2	4.96	Clear	0.84	37.92	0.0	8:25
A.	7.29	444	13.5	4.29	Clear	1.76		50.0	9:15
B.	7.28	440	14.0	3.96	Clear	1.93		100.0	10:05
C.									
D.									
Post Purge	7.36	425	14.4	3.69	Clear	1.30	40.85	160.0	11:05
Pre-Sample		"	"	"	"	"	"	"	"
Sample								165.00	11:10
Post Sample	7.36	419	14.2	3.62	Clear	1.25	40.93	170.00	11:15

Purge End: 11:05 **Pump:** Dedicated Bladder

Purge Start: 8:25 **Bailer:** N/A/

Purge Length: 160 **Bailer Seal:** N/A

Volume Purged: 160.00 gal **Purge Rate:** 1.00 GPM

Weather: Clear, Cool, Still.

Sampling Technicians: *R.S.*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D11*** Location: ***A.H.P Boundbrook***

Well Depth:	89.80	ft.	Case Size:	6.0	inch
DTWTOC:	45.11	ft.	vol/ft:	1.47	gal/ft
Water Length:	44.69	ft.	Case Vol:	65.69	gal
Vol x 3 =	197.07	gal	Vol x 5 =	328.45	gal

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.77	471	14.2	8.49	Clear	1.47	45.11	0.0	9:22
A.	7.88	402	13.9	7.46	Clear	1.28		70.0	10:32
B.	7.62	421	13.8	7.02	Clear	2.16		140.0	11:42
C.									
D.									
Post Purge	7.87	420	14.1	7.93	Clear	1.02	46.38	210.0	12:52
Pre-Sample		"	"	"	"	"	"	"	"
Sample								213.00	12:55
Post Sample	7.89	420	14.2	5.69	Clear	0.92	46.34	215.00	12:57

Purge End: 12:52

Purge Start: 9:22

Purge Length: 210

Volume Purged: 210.00 gal

Pump: Dedicated Bladder

Bailer: N/A/

Bailer Seal: N/A

Purge Rate: 1.00 GPM

Weather: Clear, Warm, Still.

Sampling Technicians: *GB*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D12***

Location: ***A.H.P Boundbrook***

Well Depth:	77.10	ft.	Case Size:	6.0	inch
DTWTOC:	46.02	ft.	vol/ft:	1.47	gal/ft
Water Length:	31.08	ft.	Case Vol:	45.69	gal
Vol x 3 =	137.07	gal	Vol x 5 =	228.45	gal

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.90	904	14.0	6.71	Clear	8.27	46.02	0.0	9:07
A.	7.02	835	14.4	6.47	Clear	9.27		8.0	9:55
B.	7.01	749	147.1	6.32	Clear	22.20		96.0	10:43
C.									
D.									
Post Purge	7.02	810	14.1	6.02	Clear	16.50	47.82	144.0	11:31
Pre-Sample		"	"	"	"	"	"	"	"
Sample								148.00	11:35
Post Sample	7.02	776	14.3	6.11	Clear	14.80	47.90	150.00	11:37

Purge End:	11:31	Pump:	Dedicated Bladder
Purge Start:	9:07	Bailer:	N/A/
Purge Length:	144	Bailer Seal:	N/A
Volume Purged:	144.00 gal	Purge Rate:	1.00 GPM

Weather: Clear, Warm, Still.

Sampling Technicians: *GB*

Comments:

(r.12/09)

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D13*** **Location:** ***A.H.P Boundbrook***

Well Depth:	**85.90**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**46.77**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**39.13**	**ft.**	**Case Vol:**	**57.52**	**gal**
Vol x 3 =	**172.56**	**gal**	**Vol x 5 =**	**287.60**	**gal**

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	6.98	517	14.1	3.49	Clear	7.27	46.77	0.0	8:58
A.	7.40	525	14.5	6.32	Clear	1.29		60.0	9:58
B.	7.63	425	14.2	6.30	Clear	5.70		120.0	10:58
C.									
D.									
Post Purge	7.63	401	14.1	6.04	Clear	1.36	50.69	180.0	11:58
Pre-Sample		"	"	"	"	"	"	"	"
Sample								187.00	12:05
Post Sample	7.78	402	14.6	5.54	Clear	1.00	50.60	189.00	12:07

Purge End:	**11:58**	**Pump:**	**Dedicated Bladder**
Purge Start:	**8:58**	**Bailer:**	**N/A/**
Purge Length:	**180**	**Bailer Seal:**	**N/A**
Volume Purged:	**180.00** **gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Cool, Still.

Sampling Technicians: *GB*

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D14*** **Location:** ***A.H.P Boundbrook***

Well Depth:	**80.50**	**ft.**	**Case Size:**	**6.0**	**inch**
DTWTOC:	**42.57**	**ft.**	**vol/ft:**	**1.47**	**gal/ft**
Water Length:	**37.93**	**ft.**	**Case Vol:**	**55.76**	**gal**
Vol x 3 =	**167.28**	**gal**	**Vol x 5 =**	**278.80**	**gal**

**** *Purge Monitoring* ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.76	366	14.2	8.16	Clear	1.36	42.57	0.0	12:20
A.	7.77	364	13.9	6.41	Clear	2.80		60.0	13:20
B.	7.84	355	14.2	5.33	Clear	2.98		120.0	14:20
C.									
D.									
Post Purge	7.26	376	13.8	5.27	Clear	2.34	42.91	180.0	15:20
Pre-Sample		"	"	"	"	"	"	"	"
Sample								185.00	15:25
Post Sample	7.73	350	14.3	4.52	Clear	1.79	42.85	187.00	15:27

Purge End:	**15:20**	**Pump:**	**Dedicated Bladder**
Purge Start:	**12:20**	**Bailer:**	**N/A/**
Purge Length:	**180**	**Bailer Seal:**	**N/A**
Volume Purged:	**180.00 gal**	**Purge Rate:**	**1.00** GPM

Weather: Clear, Warm, Still.

Sampling Technicians: ***GB***

Comments:

ACCUTEST

Monitoring Well Field Sheet

Date: *10/6/2009*

Client: ***Wyeth***

Well ID: **Well:** ***RCRA-D15***

Location: ***A.H.P Boundbrook***

Well Depth: **83.90** ft.

Case Size: **6.0** inch

DTWTOC: **42.25** ft.

vol/ft: **1.47** gal/ft

Water Length: **41.65** ft.

Case Vol: **61.23** gal

Vol x 3 = **183.69** gal

Vol x 5 = **306.15** gal

**** Purge Monitoring ****

Purge Method: Well Wizard

	pH	S. Cond uohms/Con	Temp degree C	D.O mg/L	Color apparent	Turbitity ntu	DTW ft	Vol gal	Time
Pre-Purge	7.57	379	13.6	8.44	Clear	1.47	42.25	0.0	11:55
A.	7.58	403	13.9	5.59	Clear	0.91		65.0	13:00
B.	7.65	380	13.5	6.26	Clear	1.31		130.0	14:05
C.									
D.									
Post Purge	7.64	388	13.8	5.87	Clear	1.41	42.63	195.0	15:10
Pre-Sample		"	"	"	"	"	"	"	"
Sample								200.00	15:15
Post Sample	7.63	384	13.5	5.31	Clear	1.19	42.65	202.00	15:17

Purge End: **15:10**

Pump: **Dedicated Bladder**

Purge Start: **11:55**

Bailer: **N/A/**

Purge Length: **195**

Bailer Seal: **N/A**

Volume Purged: **195.00** gal

Purge Rate: **1.00** GPM

Weather: Clear, Warm, Still.

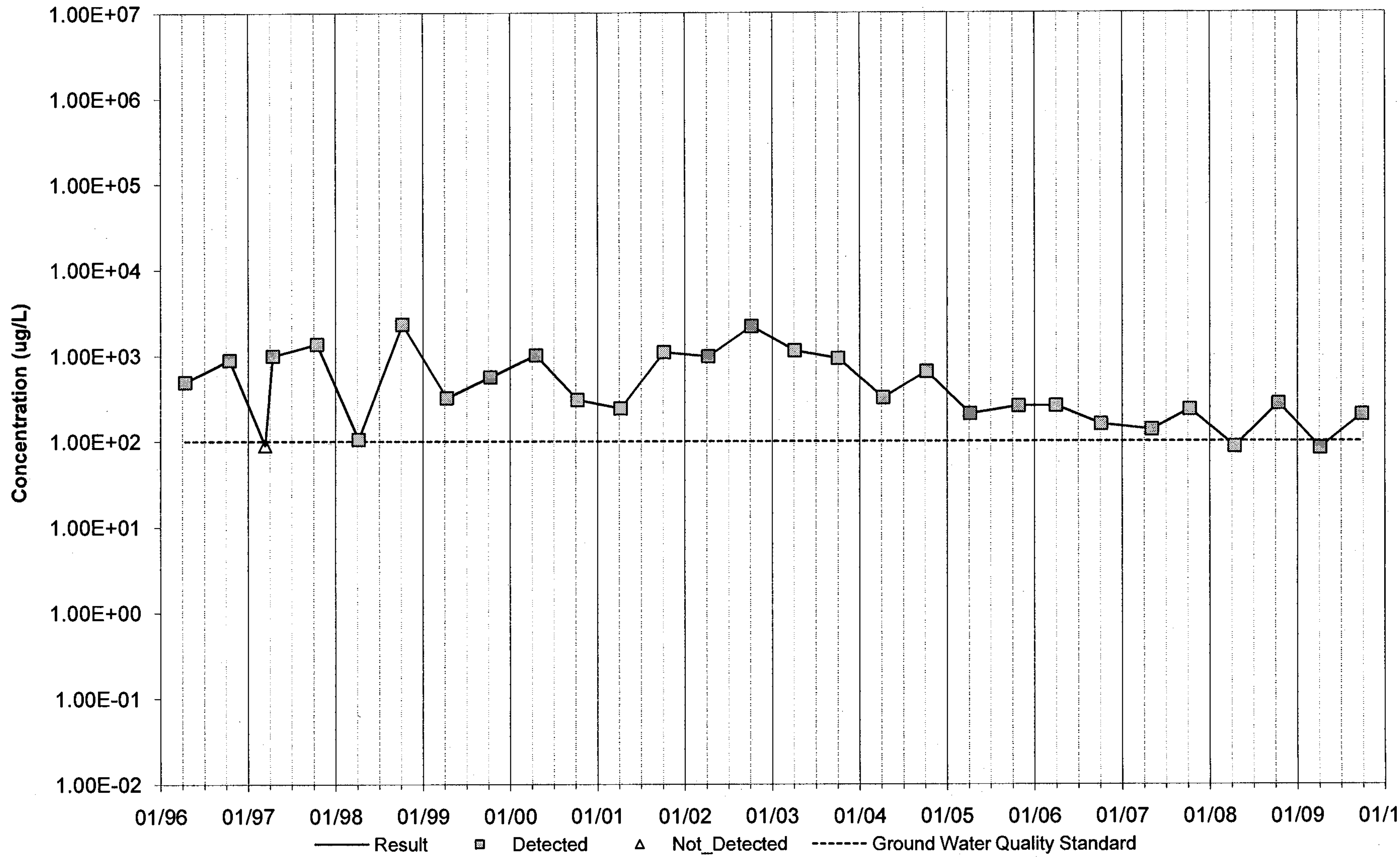
Sampling Technicians: *GB*

Comments:

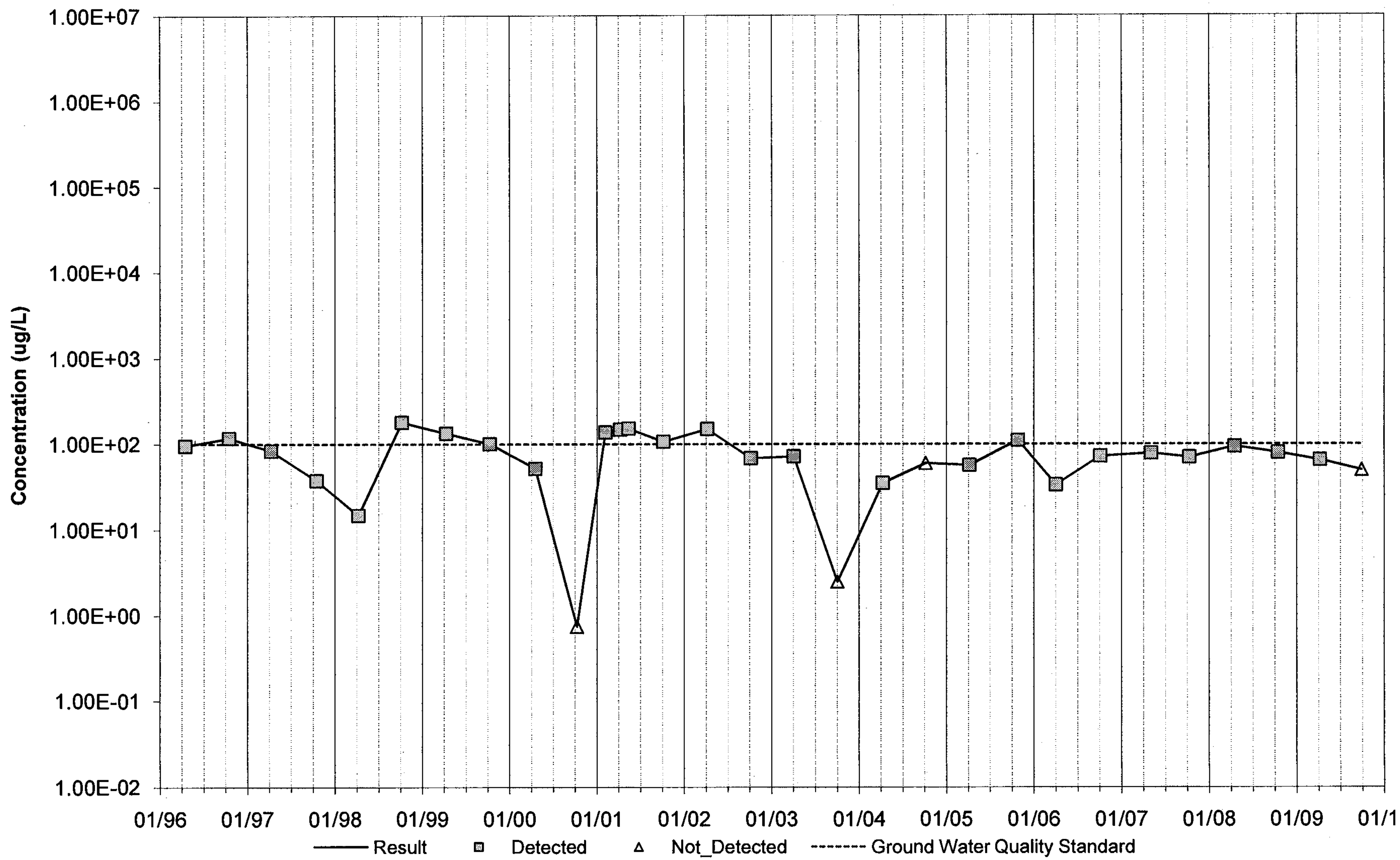
Appendix C

Trends Graphs

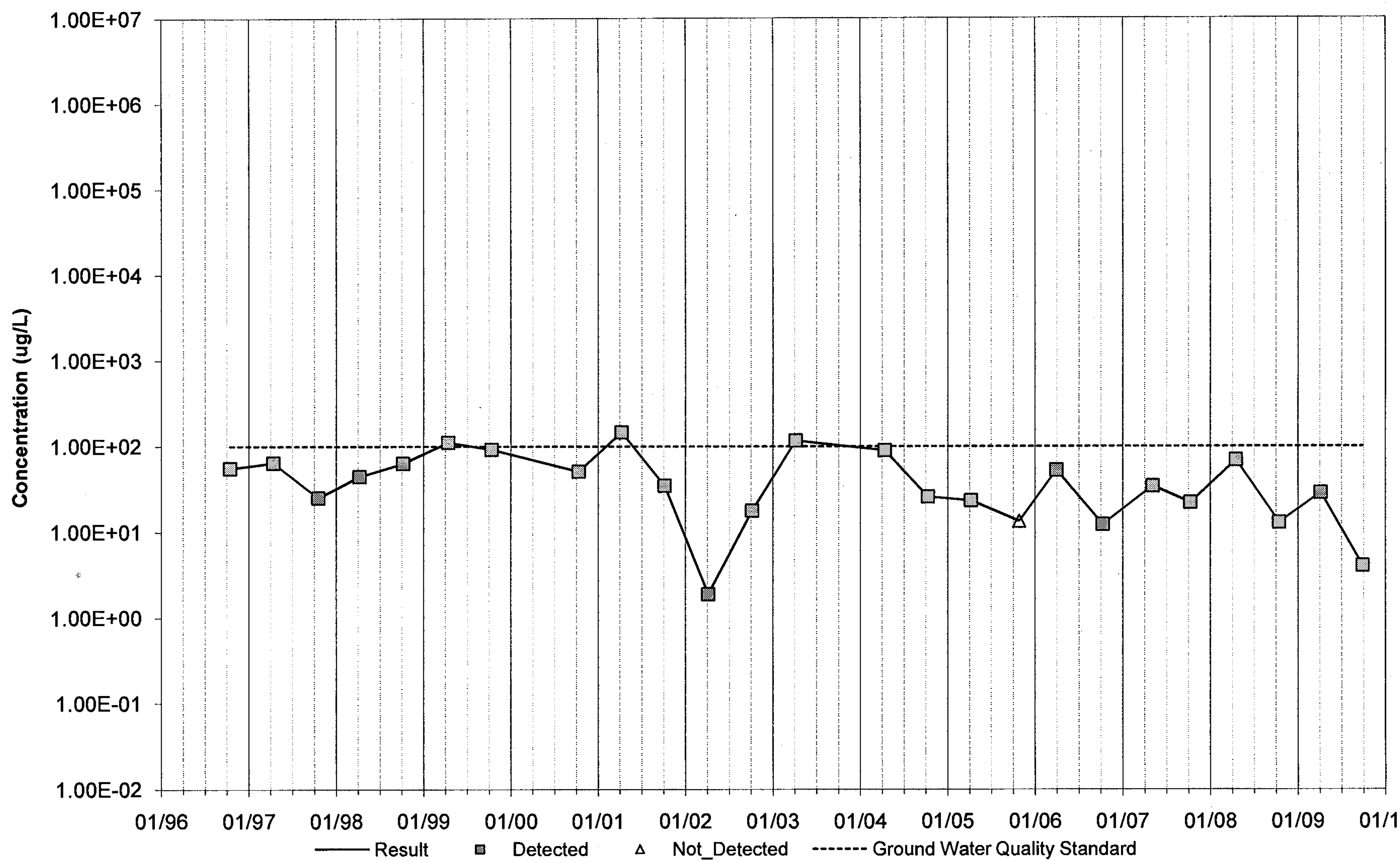
Monitoring Well: 19R
105-67-9 (2,4-Dimethylphenol)
Log Scale Concentrations



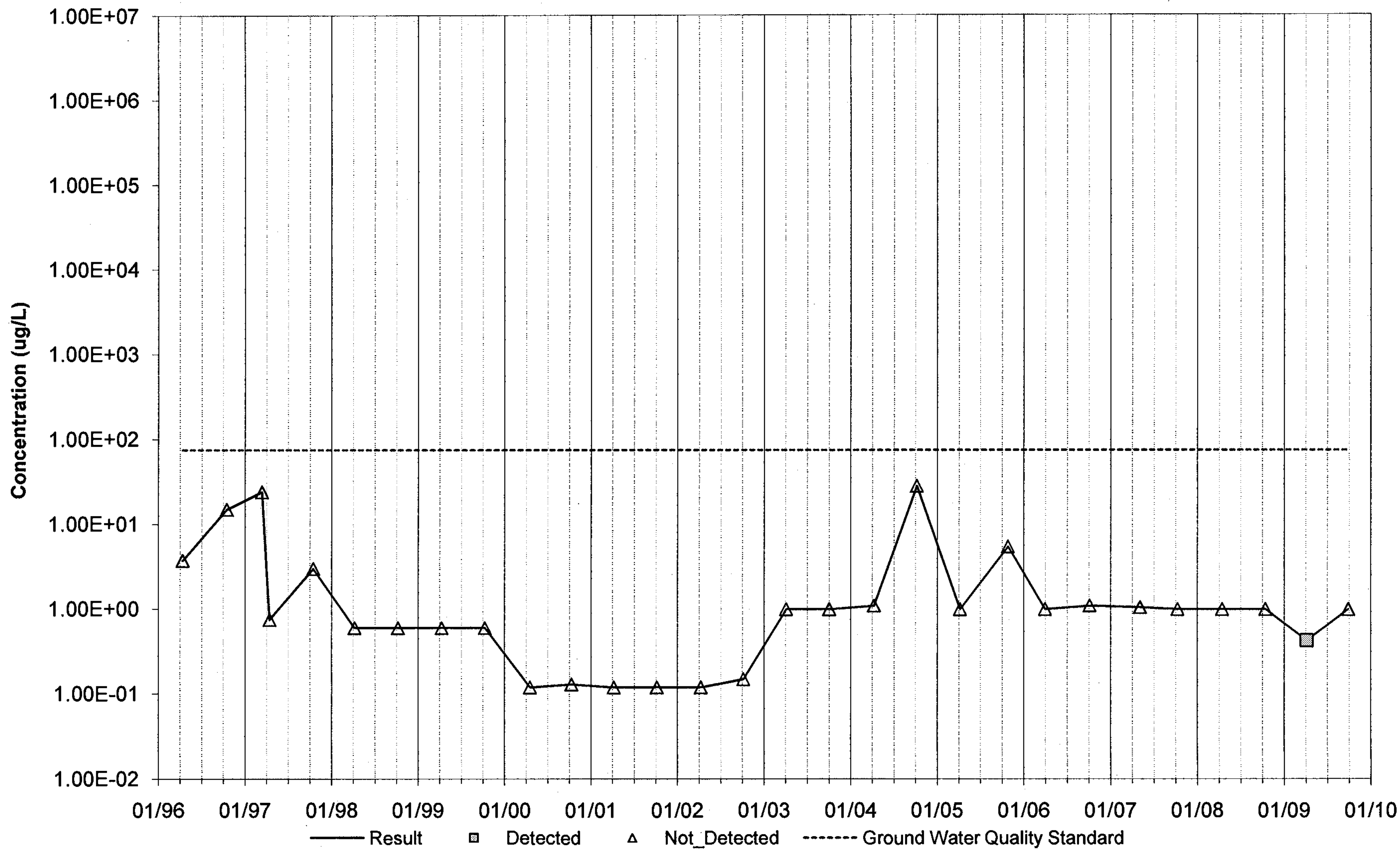
Monitoring Well: MW-2
105-67-9 (2,4-Dimethylphenol)
Log Scale Concentrations



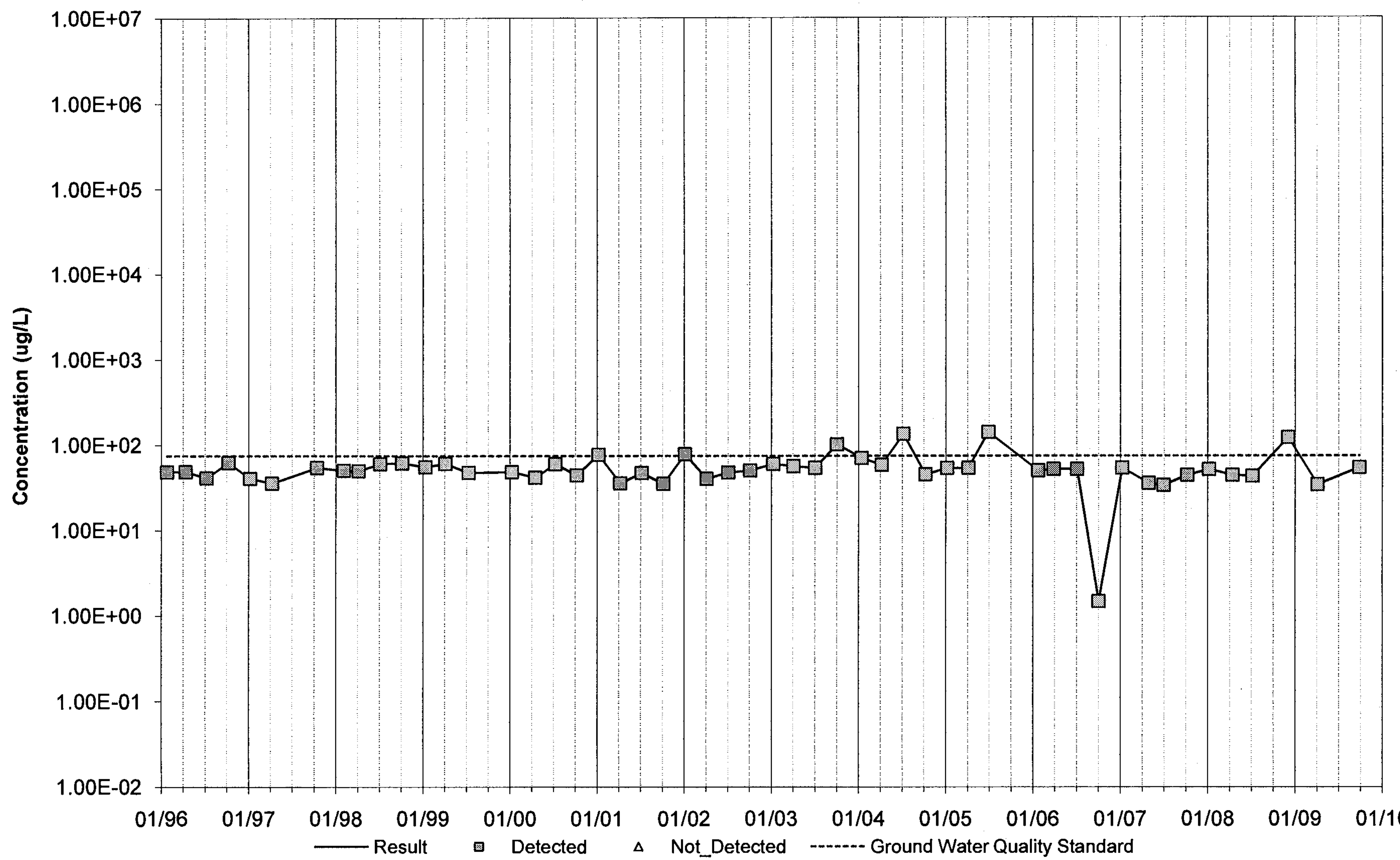
Monitoring Well: TFP-94-1R
105-67-9 (2,4-Dimethylphenol)
Log Scale Concentrations



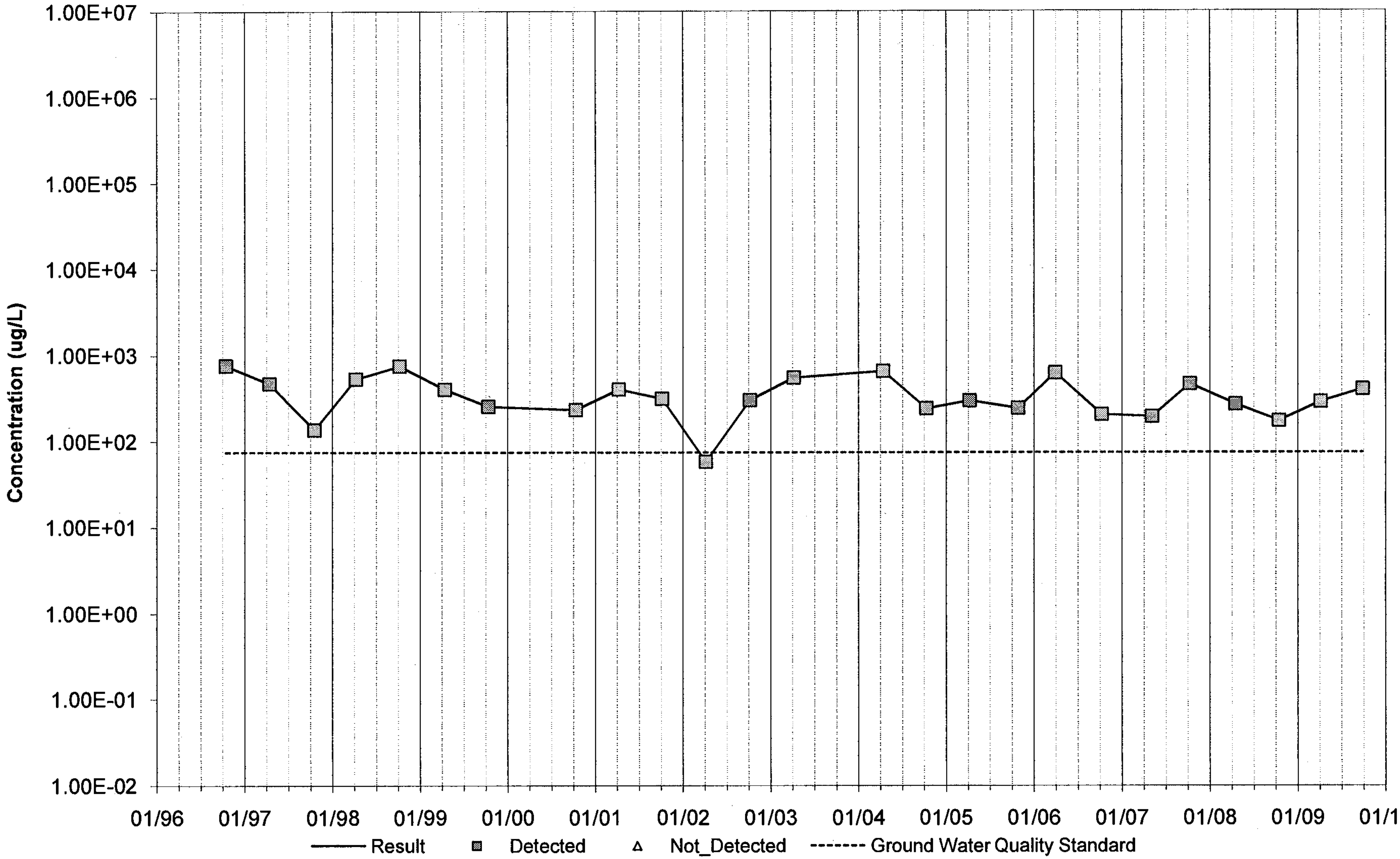
Monitoring Well: 19R
106-46-7 (1,4-Dichlorobenzene)
Log Scale Concentrations

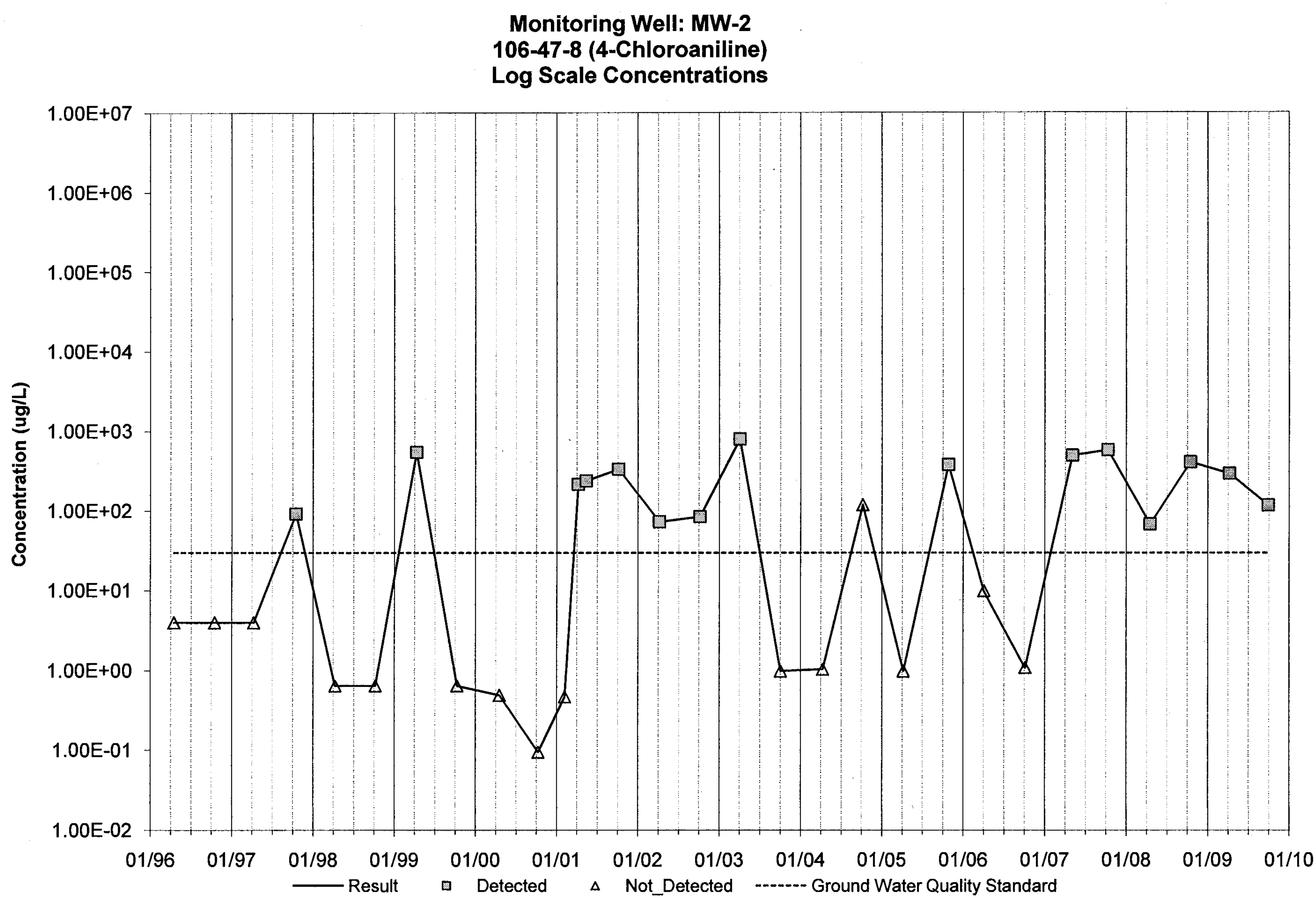


Monitoring Well: PW-2
106-46-7 (1,4-Dichlorobenzene)
Log Scale Concentrations



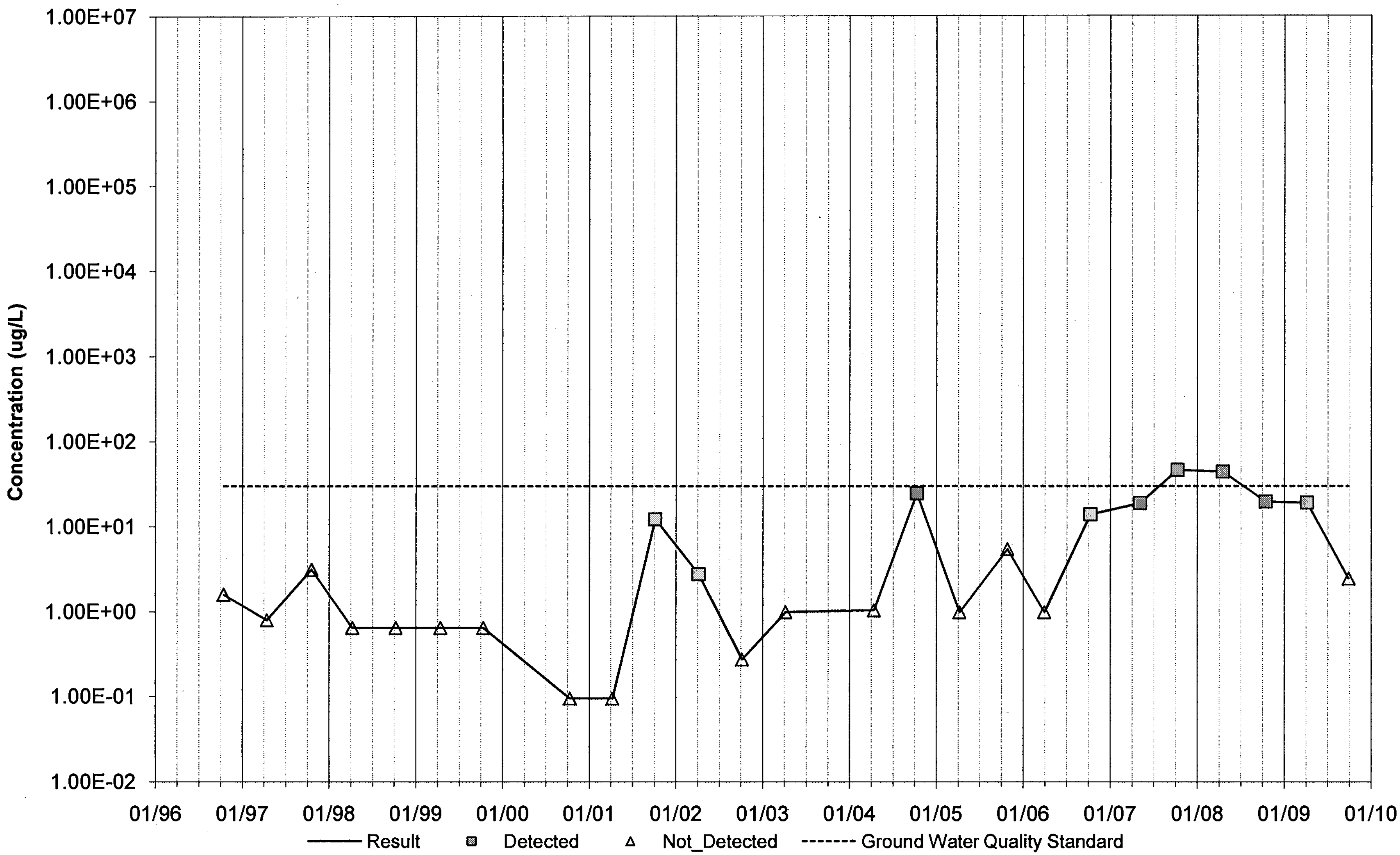
Monitoring Well: TFP-94-1R
106-46-7 (1,4-Dichlorobenzene)
Log Scale Concentrations



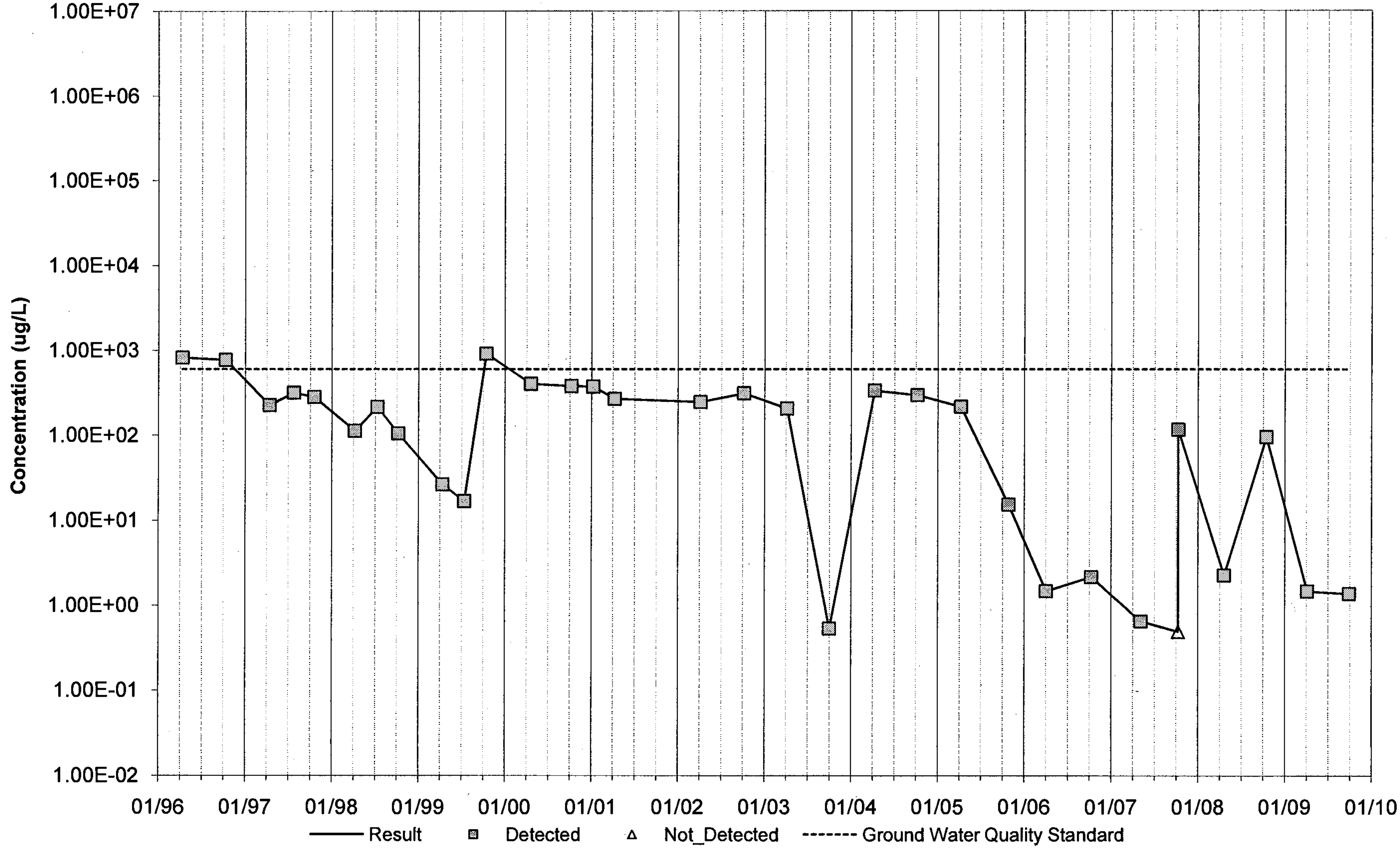


Monitoring Well: MW-2
106-47-8 (4-Chloroaniline)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

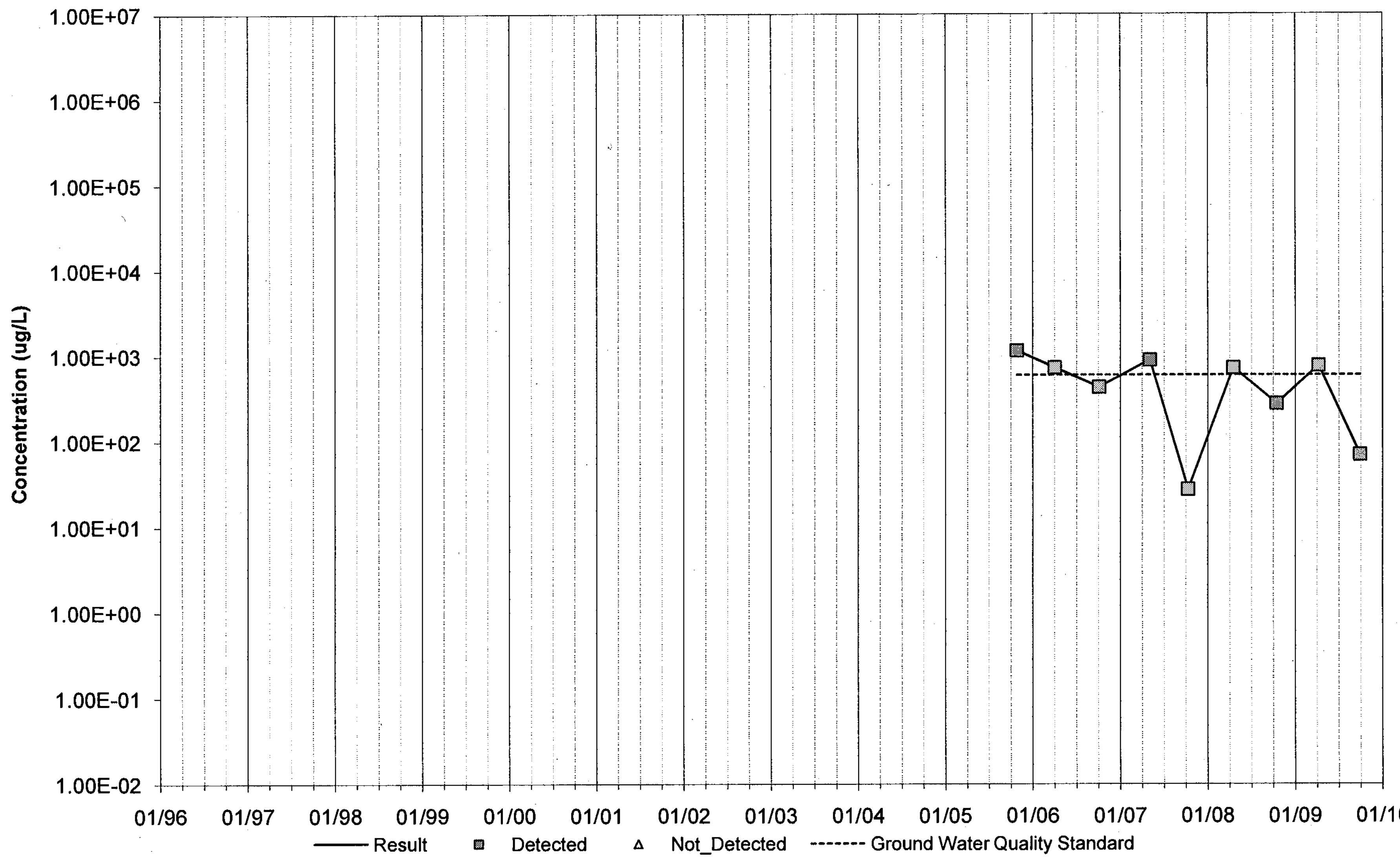
Monitoring Well: TFP-94-1R
106-47-8 (4-Chloroaniline)
Log Scale Concentrations



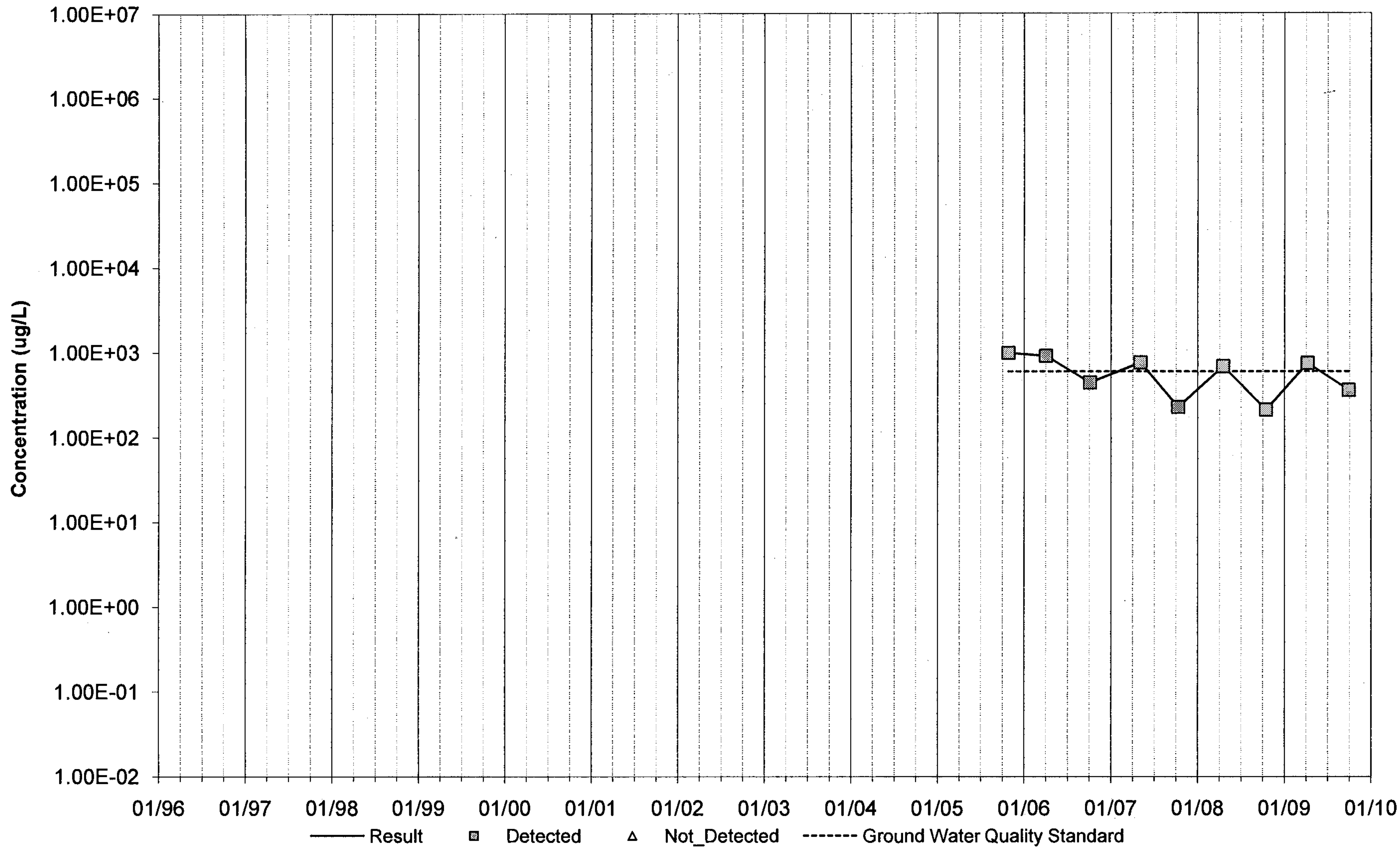
Monitoring Well: 38R
108-88-3 (Toluene)
Log Scale Concentrations



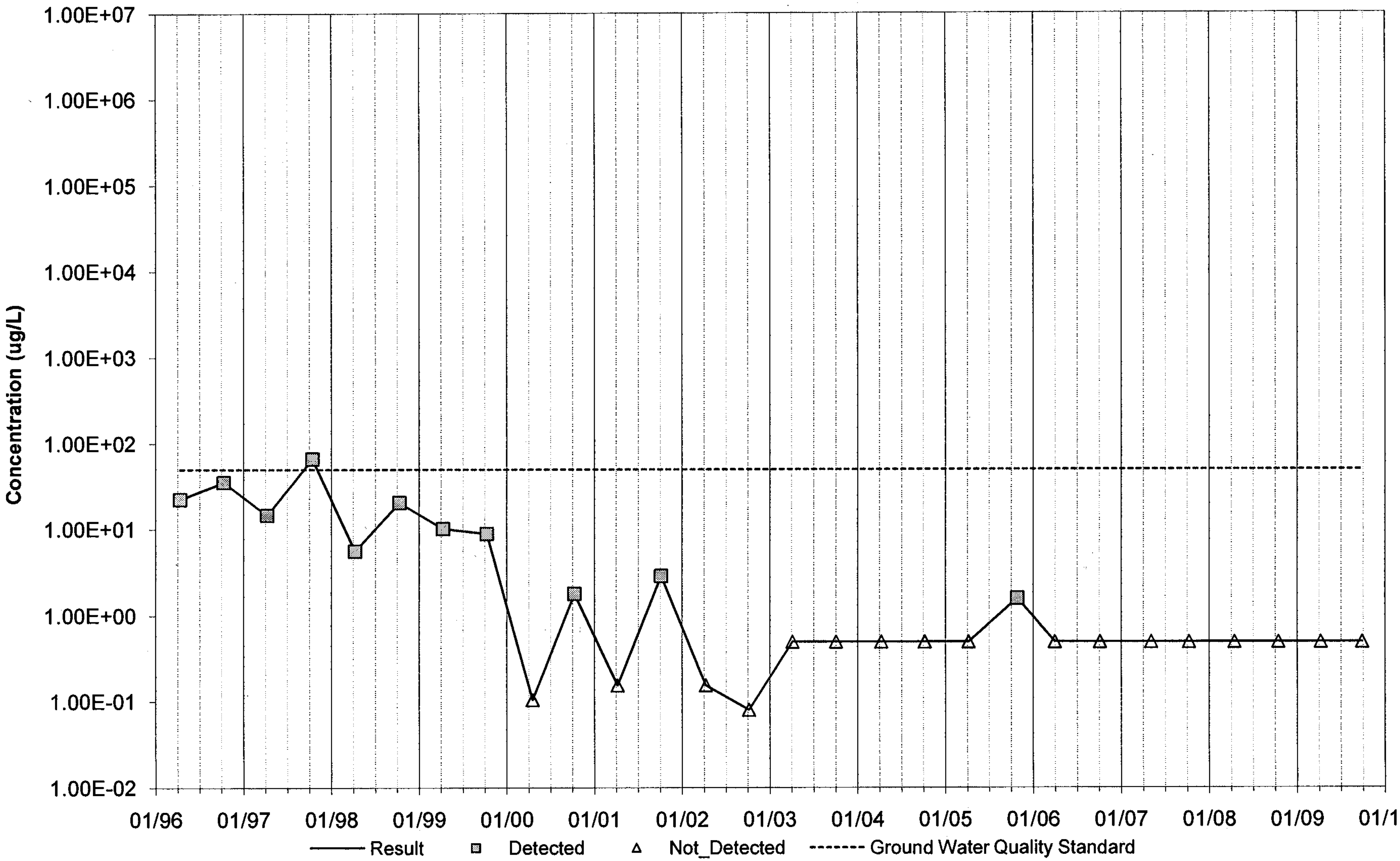
Monitoring Well: MW2 ZA
108-88-3 (Toluene)
Log Scale Concentrations



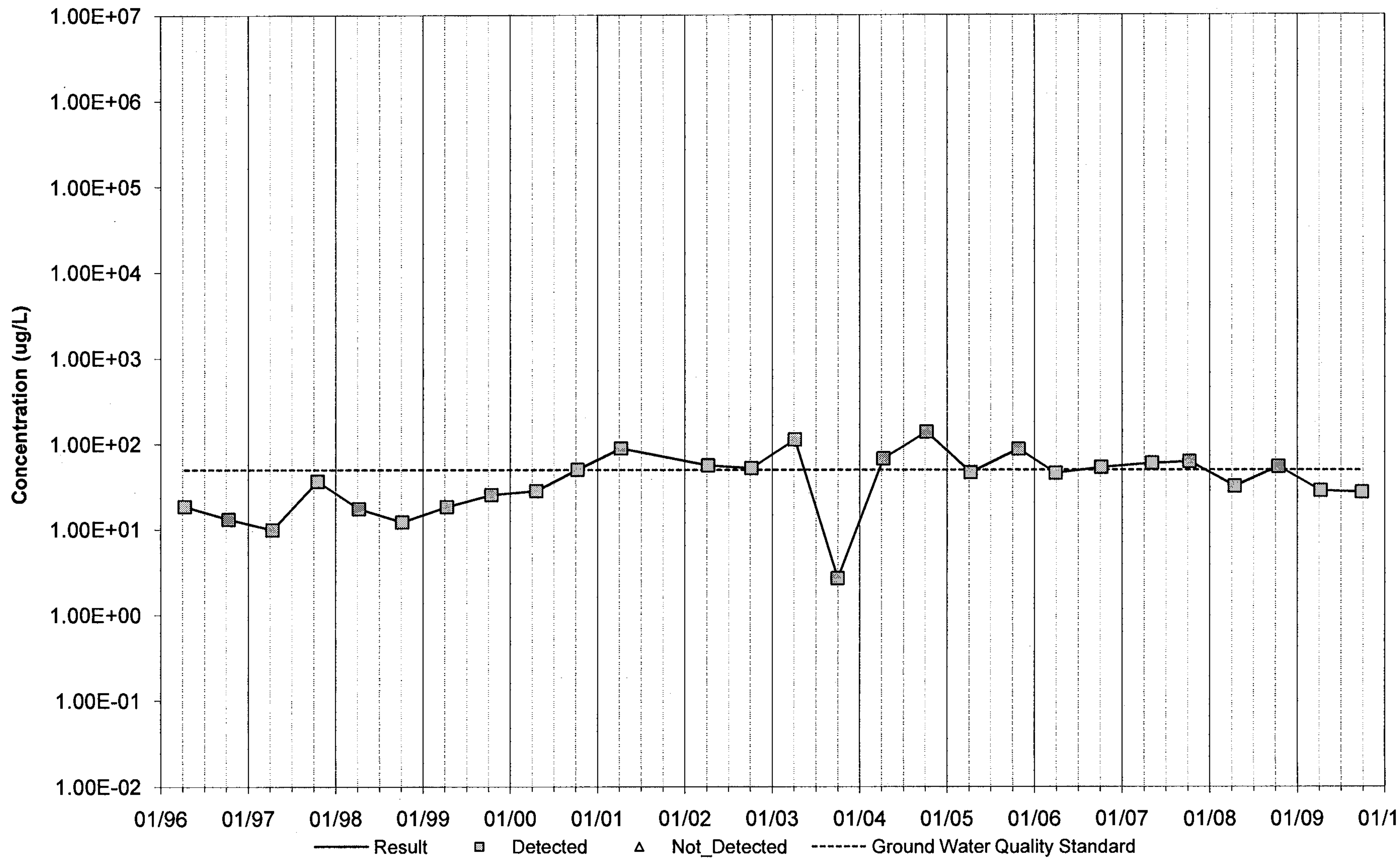
Monitoring Well: MW2 ZB
108-88-3 (Toluene)
Log Scale Concentrations



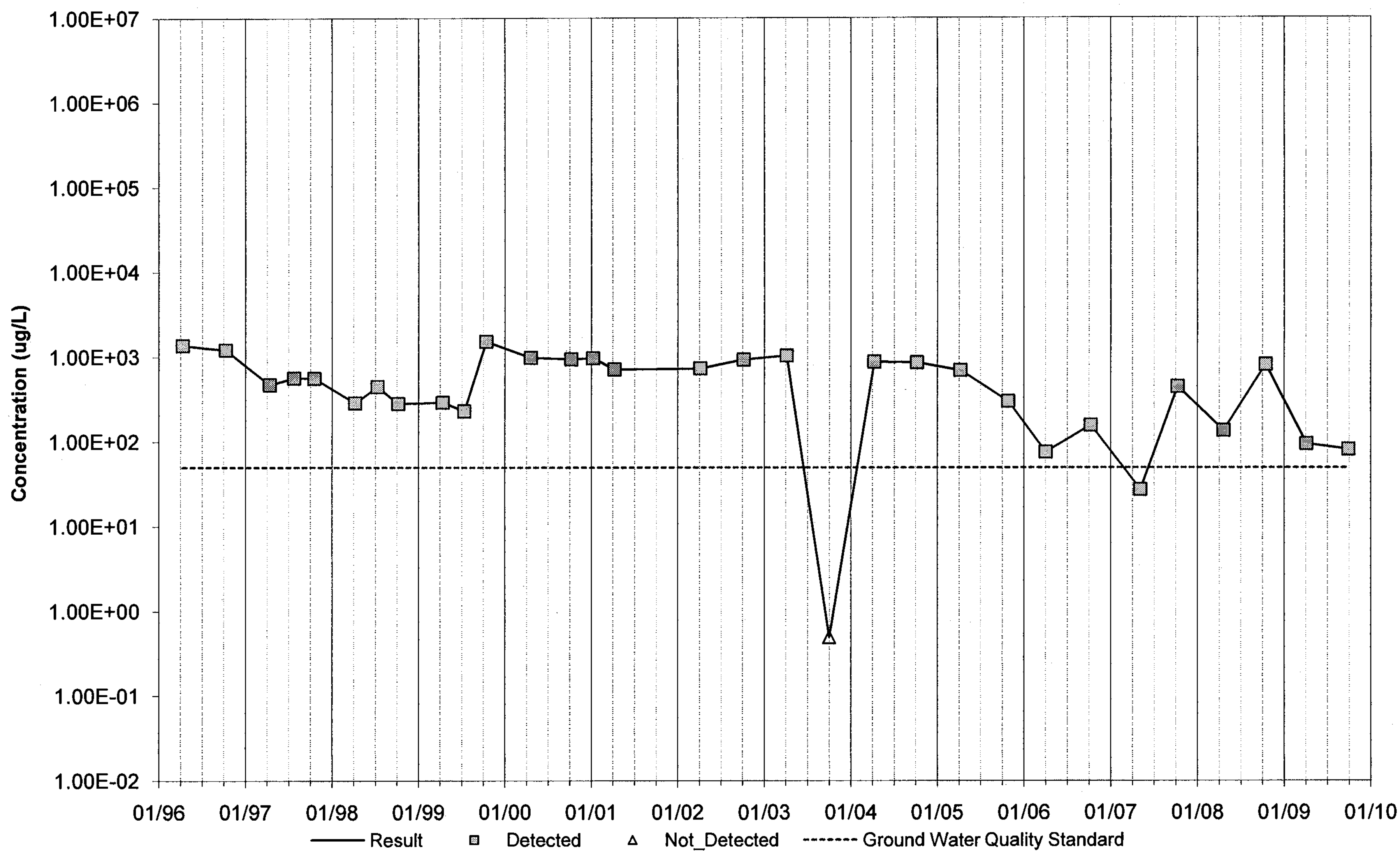
Monitoring Well: 21R
108-90-7 (Chlorobenzene)
Log Scale Concentrations



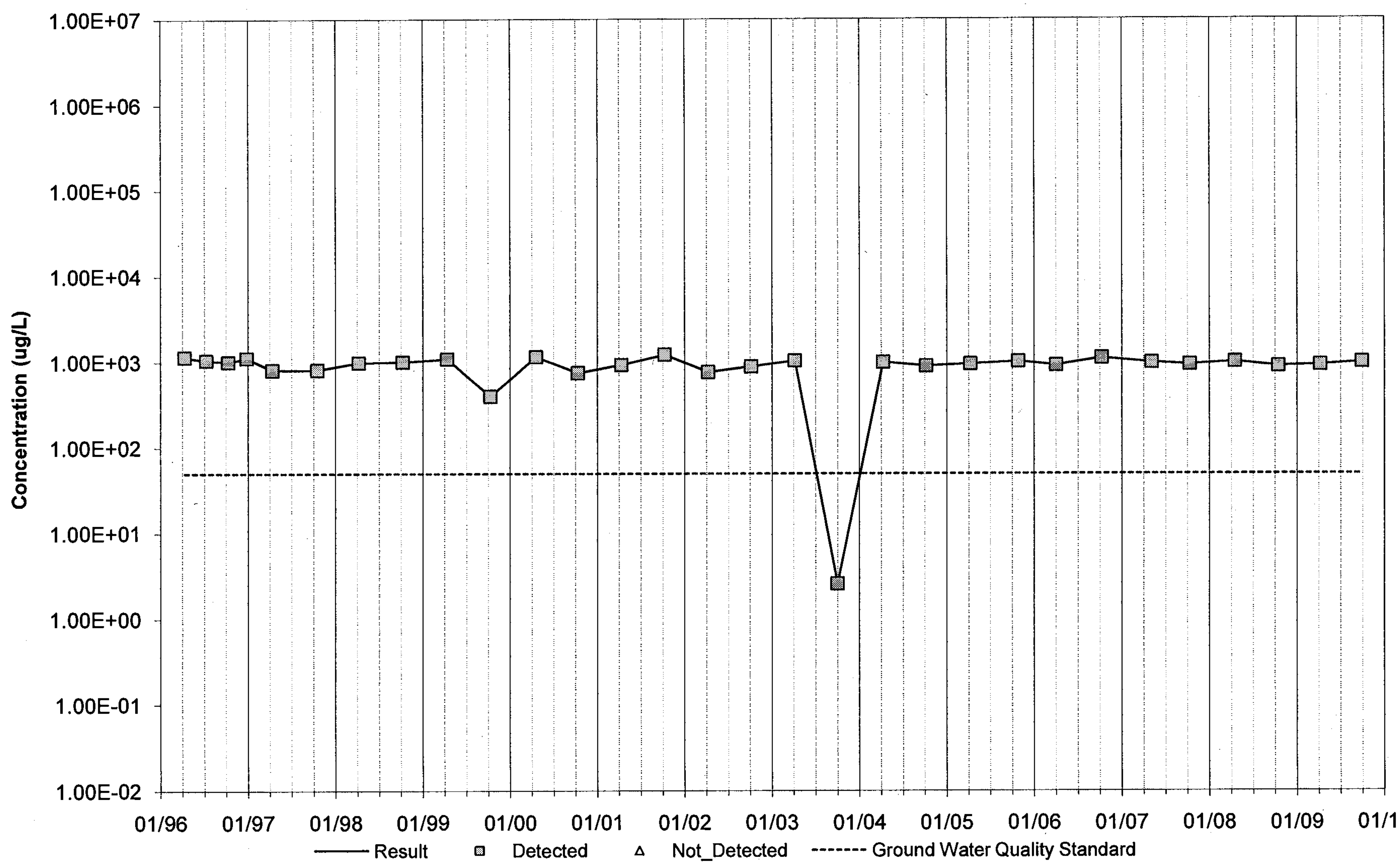
Monitoring Well: 32R
108-90-7 (Chlorobenzene)
Log Scale Concentrations



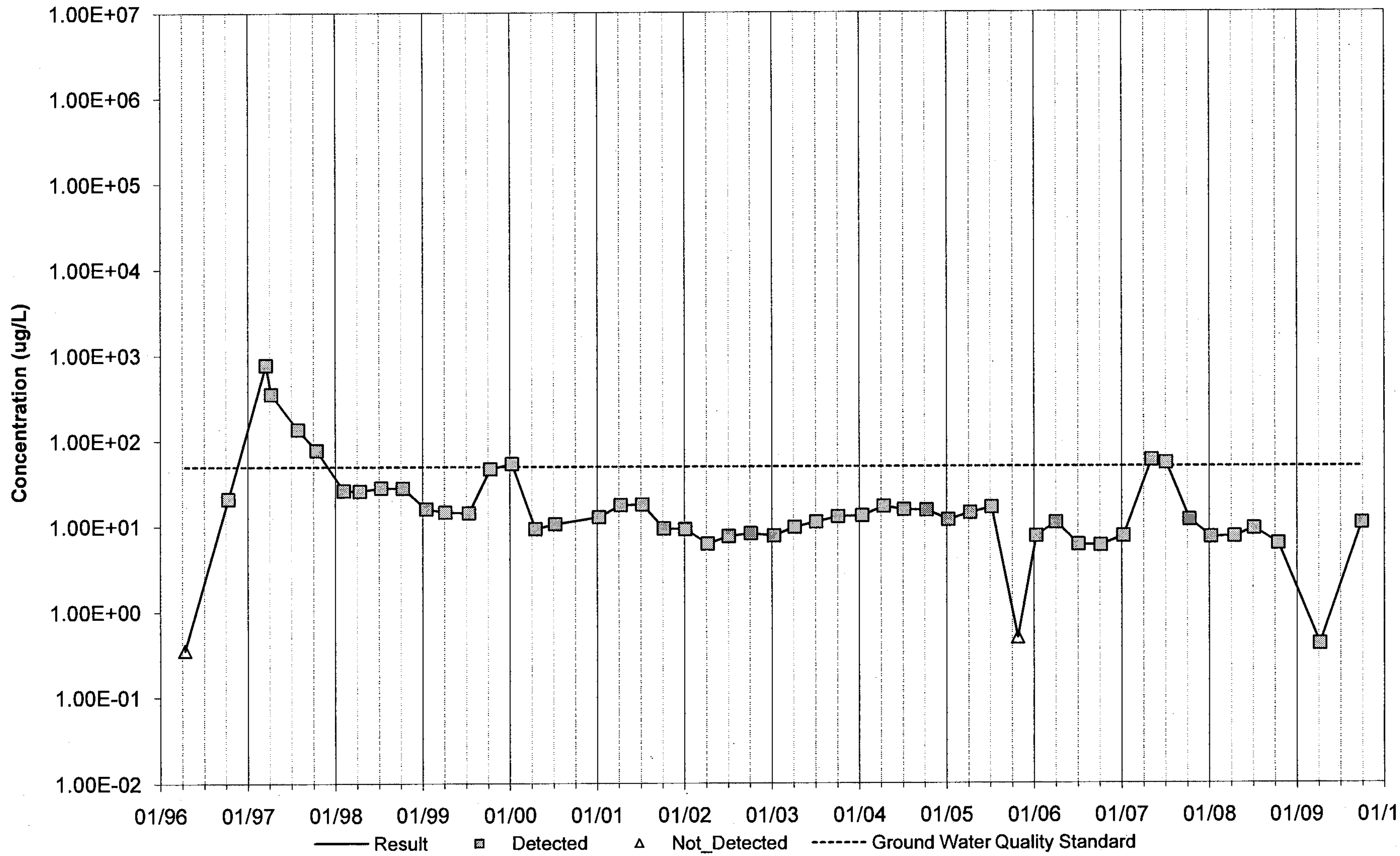
Monitoring Well: 38R
108-90-7 (Chlorobenzene)
Log Scale Concentrations

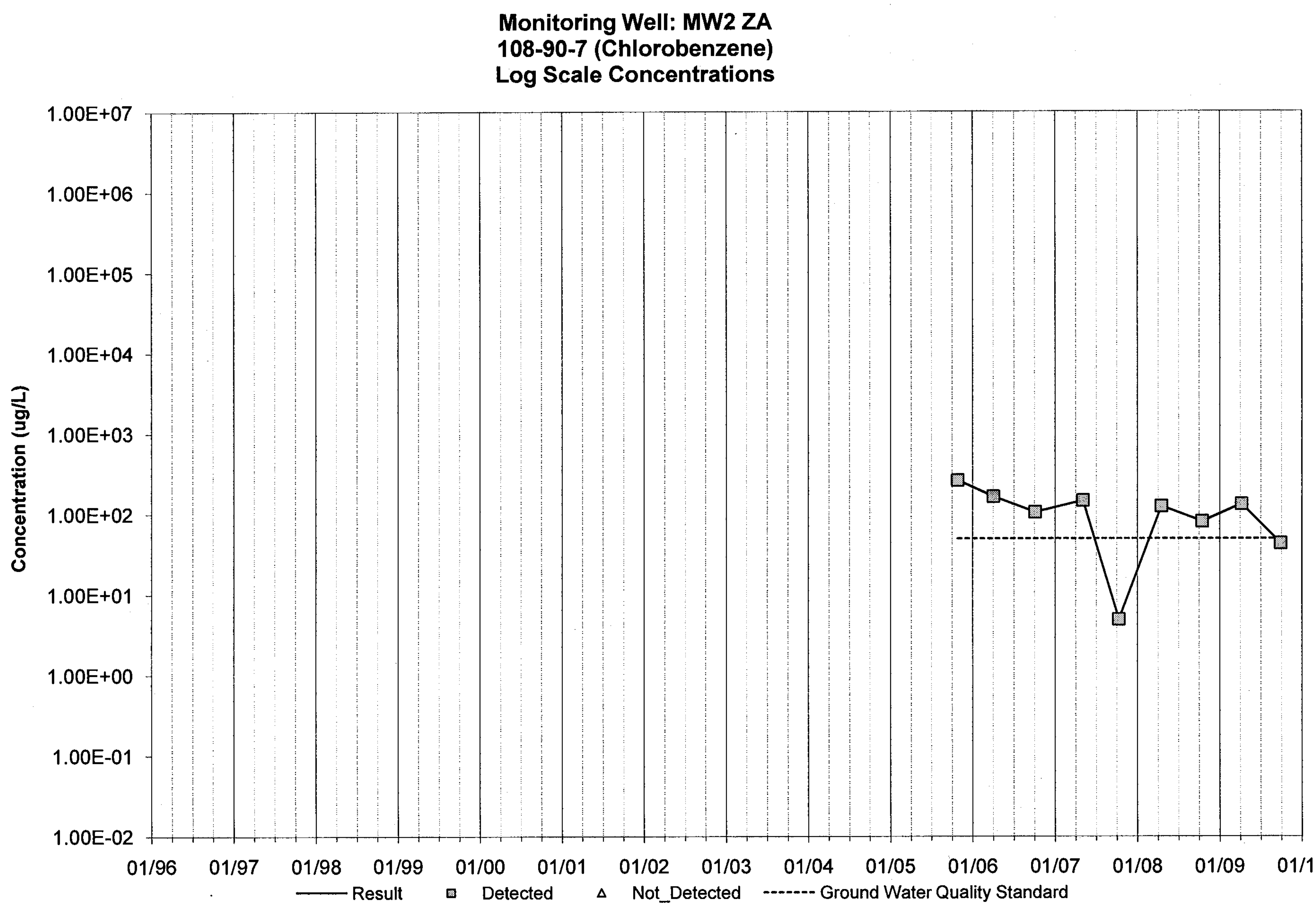


Monitoring Well: 42R
108-90-7 (Chlorobenzene)
Log Scale Concentrations



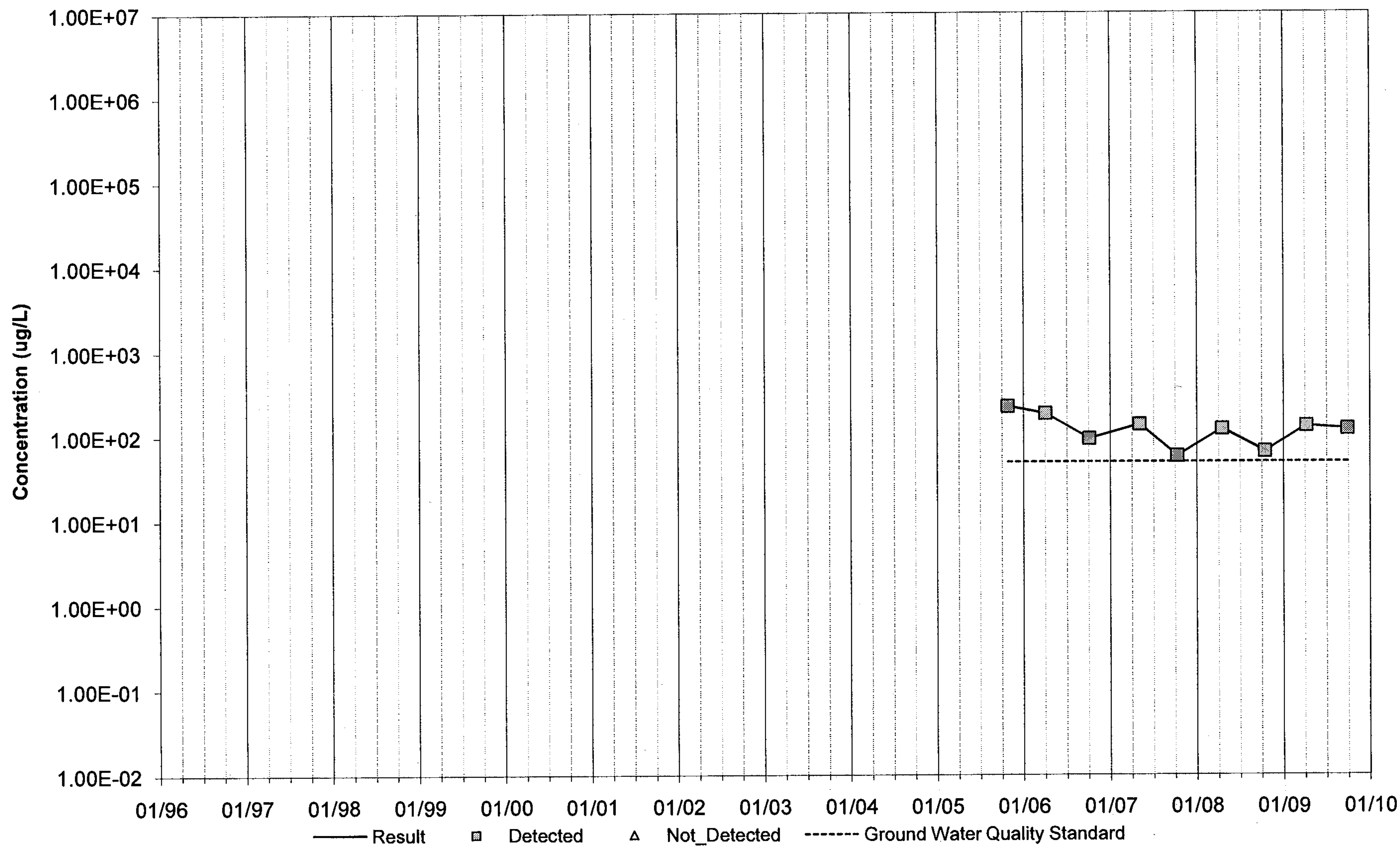
Monitoring Well: AAA
108-90-7 (Chlorobenzene)
Log Scale Concentrations



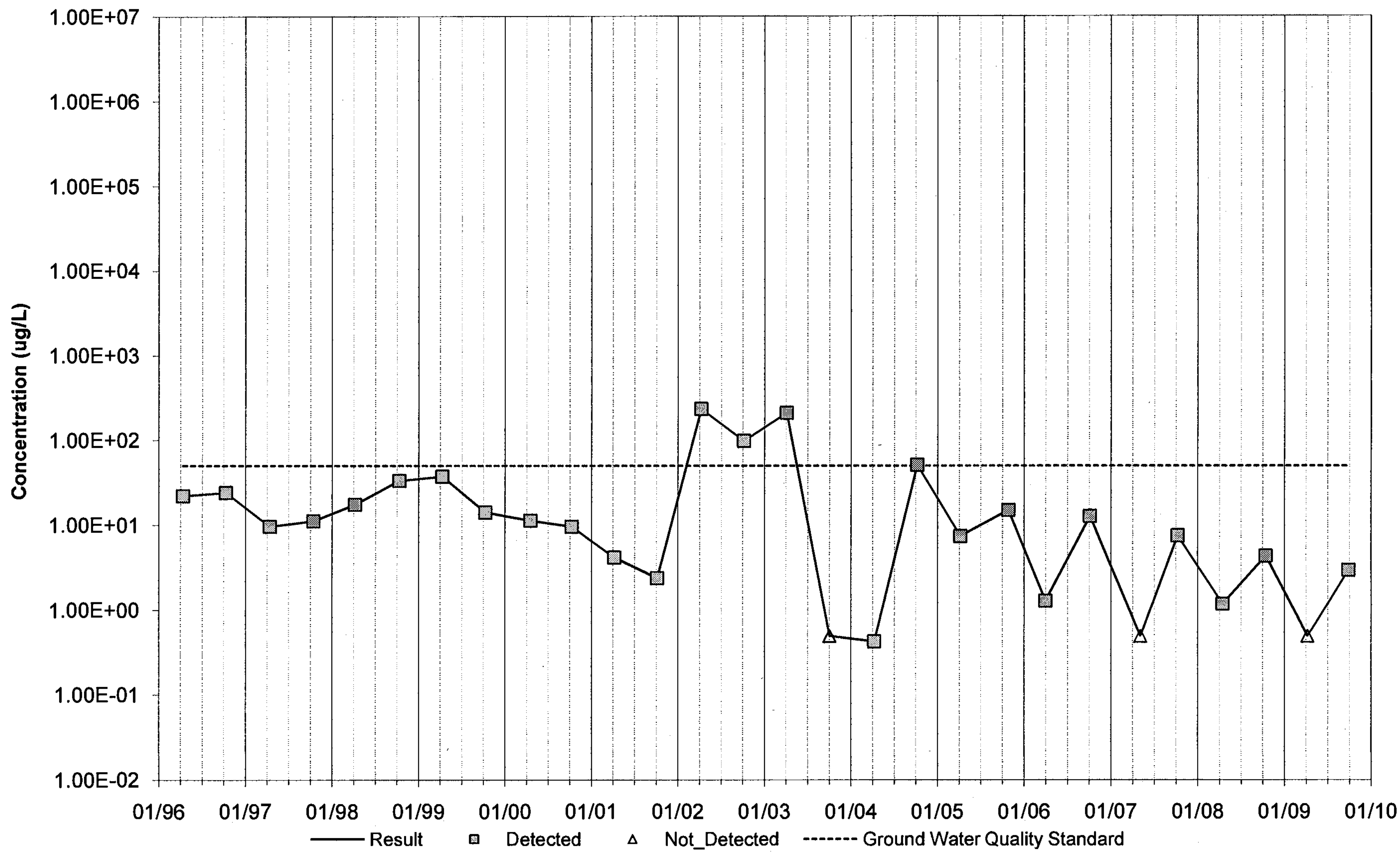


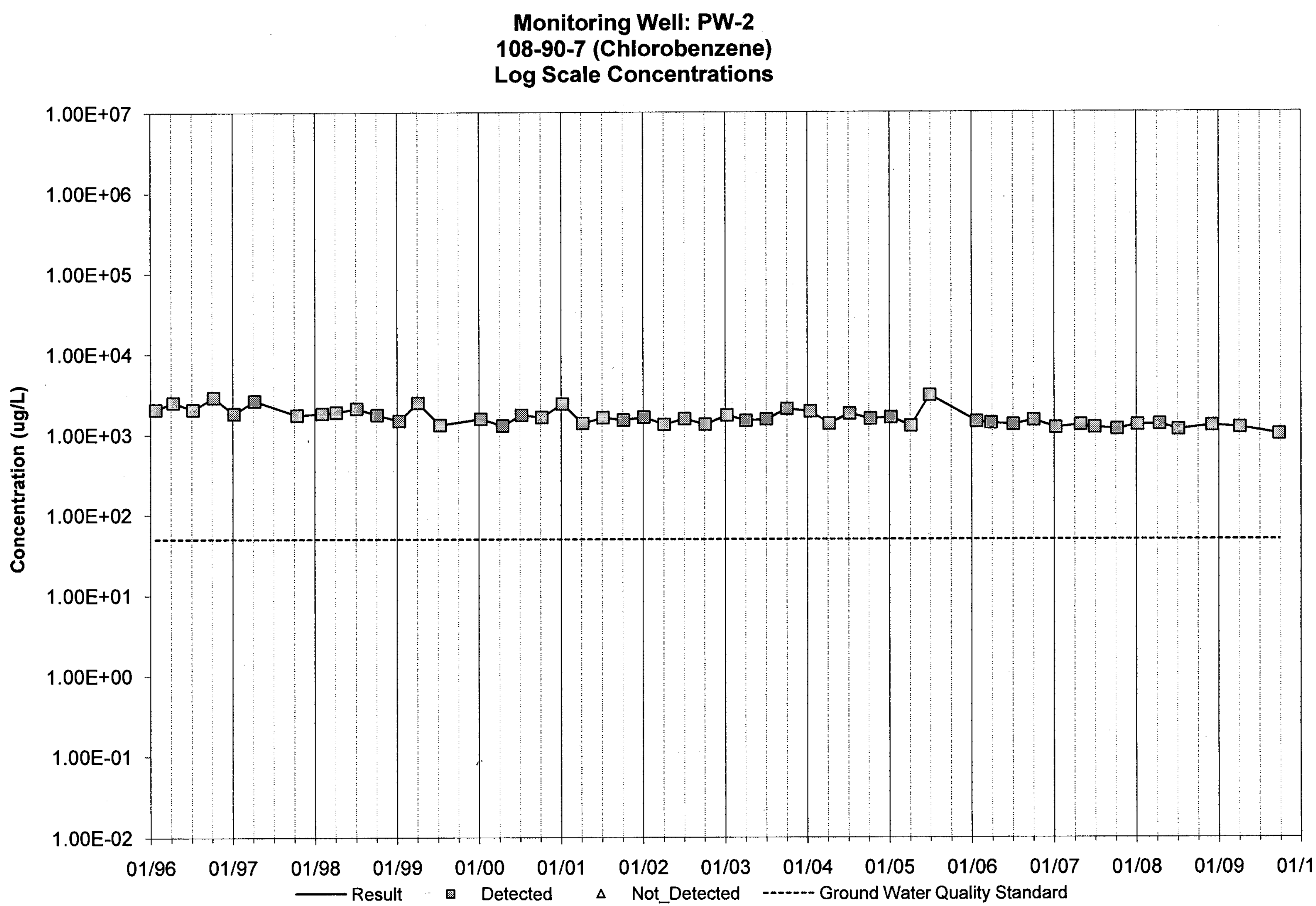
Monitoring Well: MW2 ZA
108-90-7 (Chlorobenzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: MW2 ZB
108-90-7 (Chlorobenzene)
Log Scale Concentrations



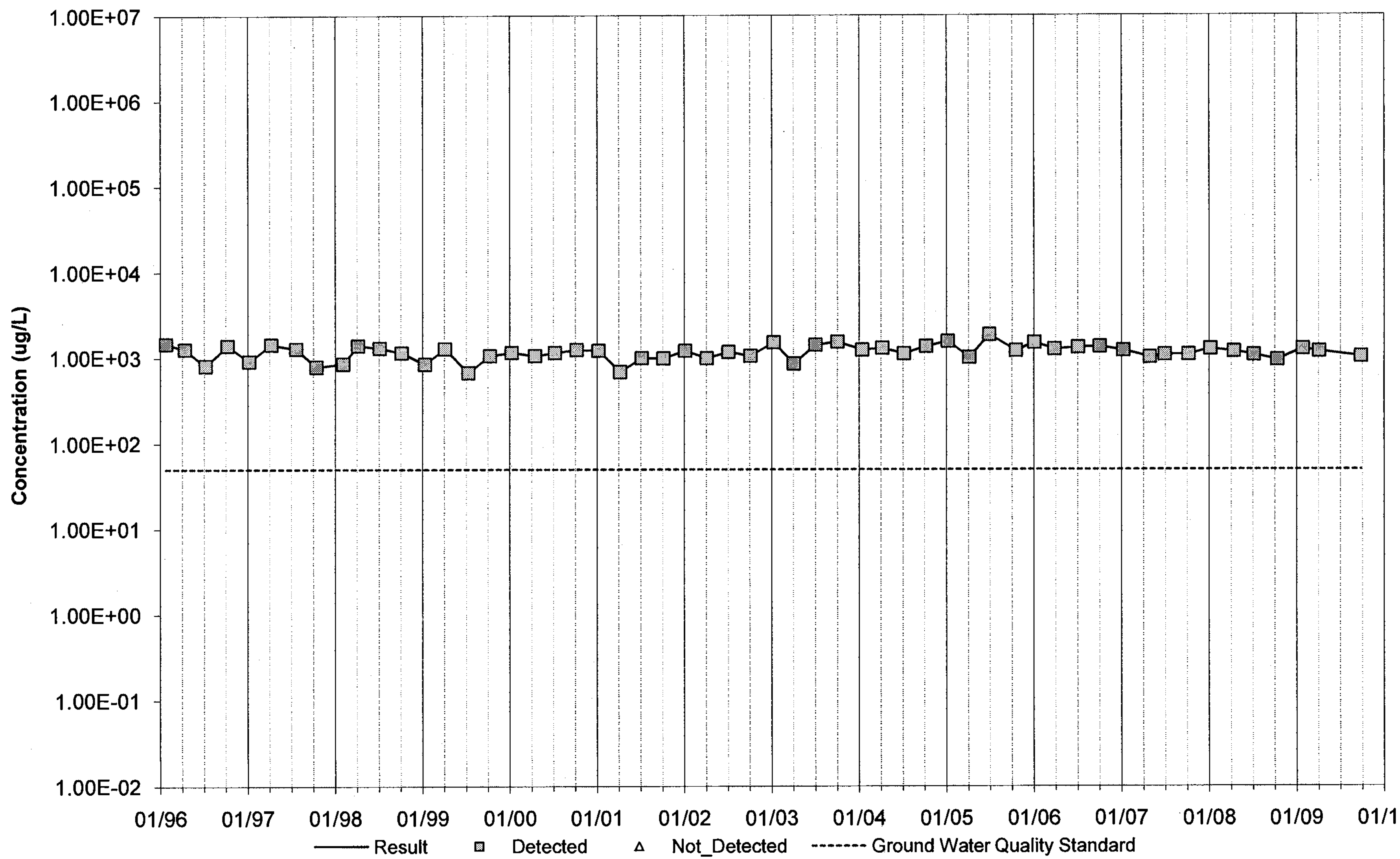
Monitoring Well: O-R
108-90-7 (Chlorobenzene)
Log Scale Concentrations



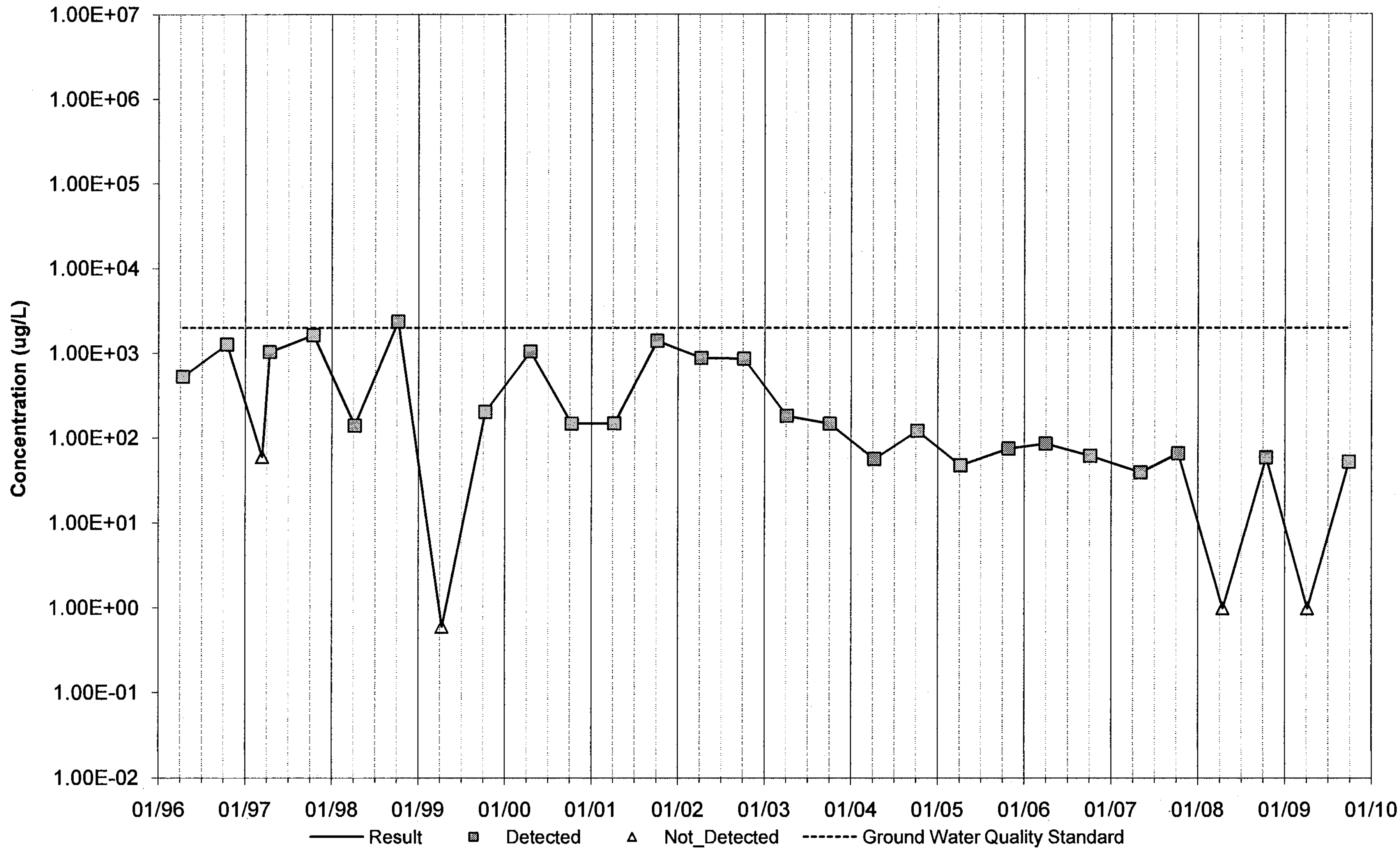


Monitoring Well: PW-2
108-90-7 (Chlorobenzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

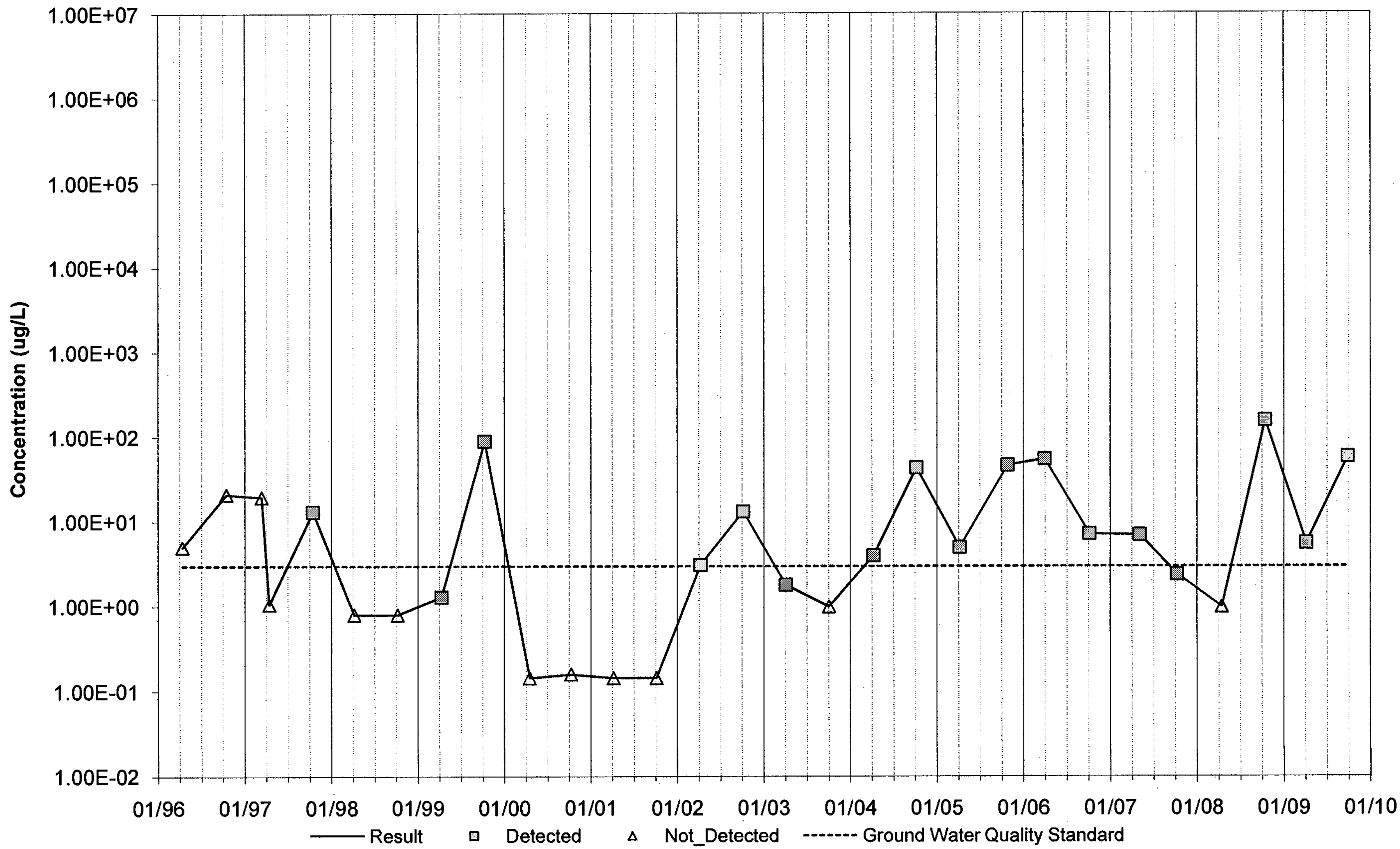
Monitoring Well: PW-3
108-90-7 (Chlorobenzene)
Log Scale Concentrations

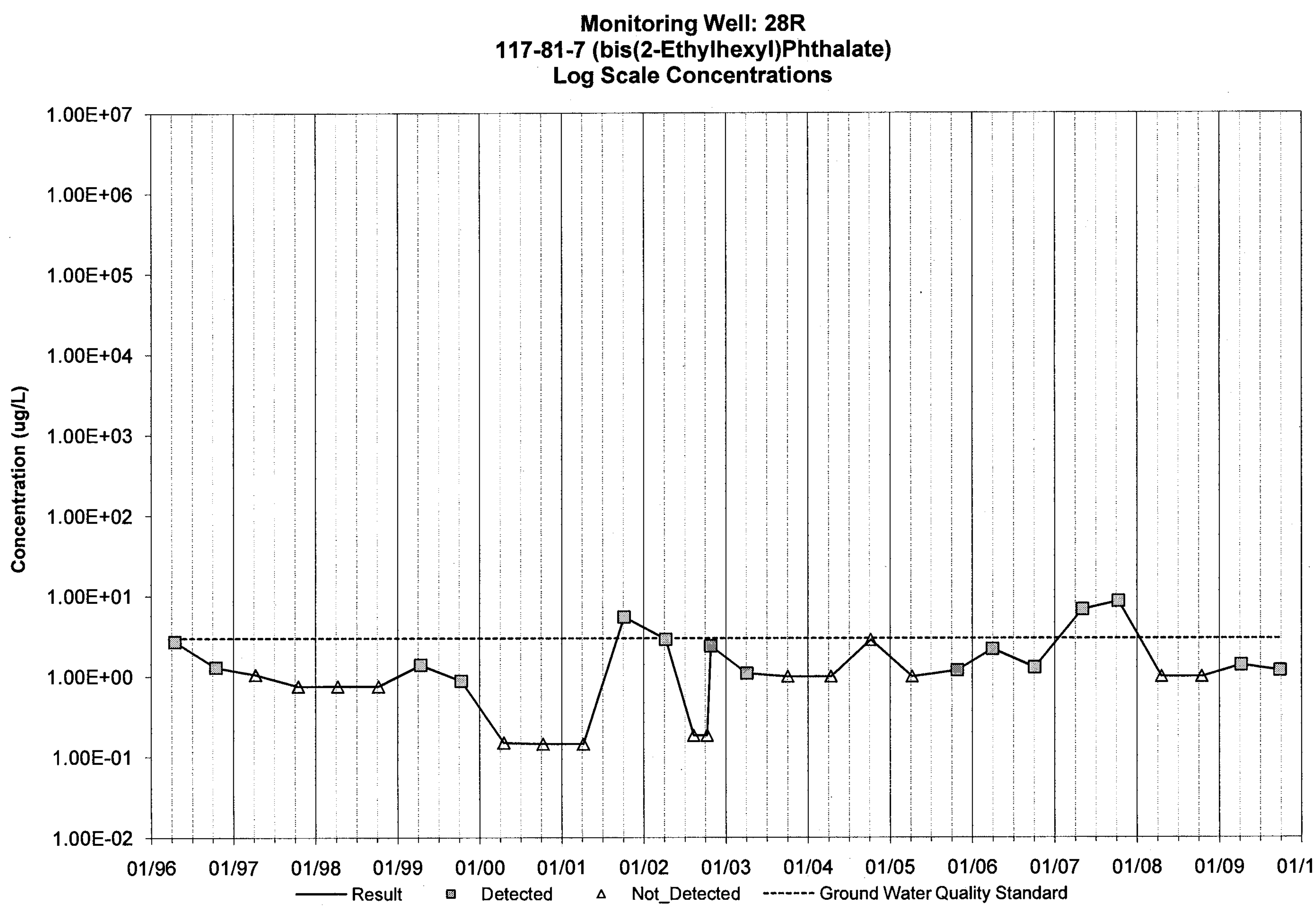


Monitoring Well: 19R
108-95-2 (Phenol)
Log Scale Concentrations

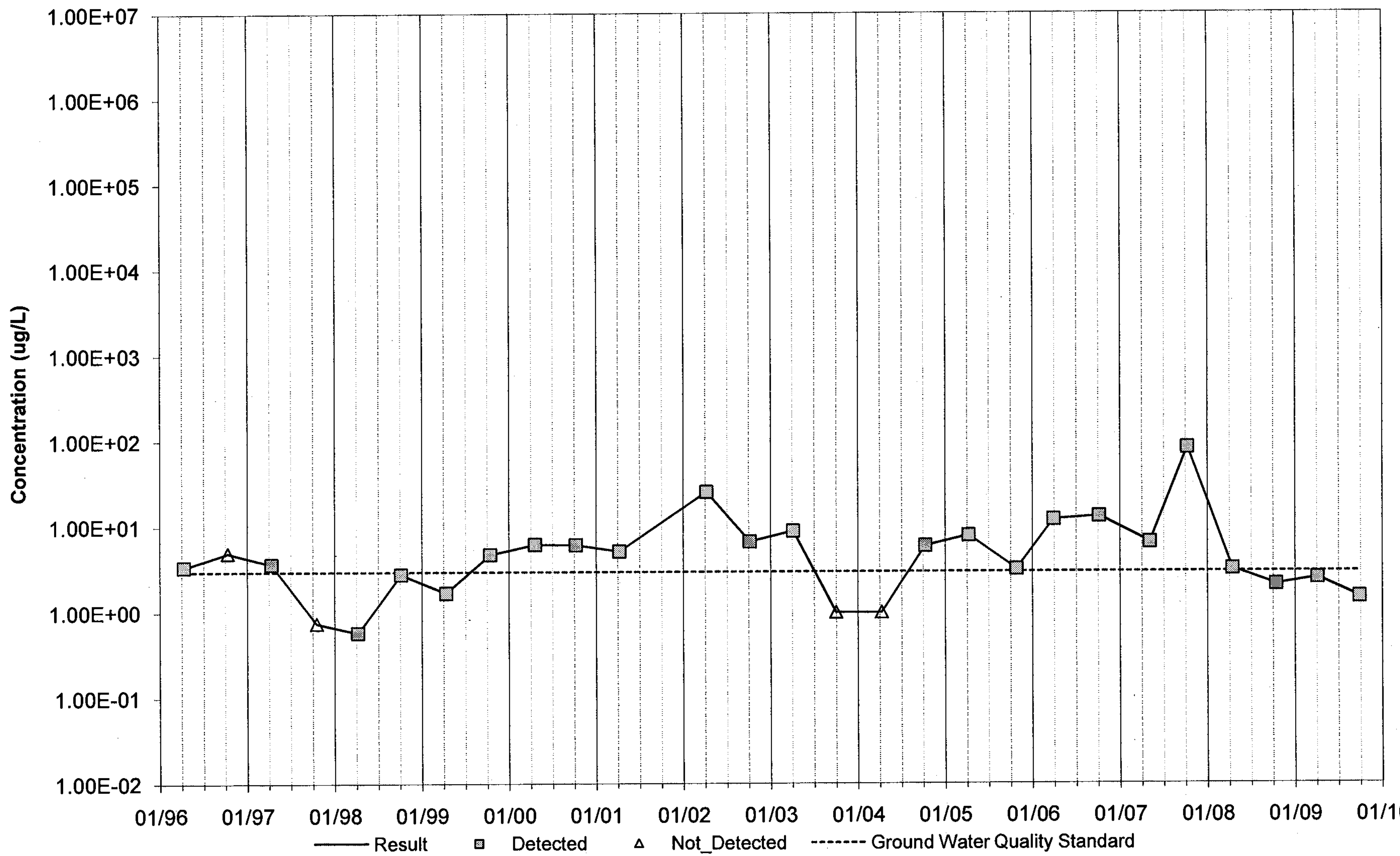


Monitoring Well: 19R
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations

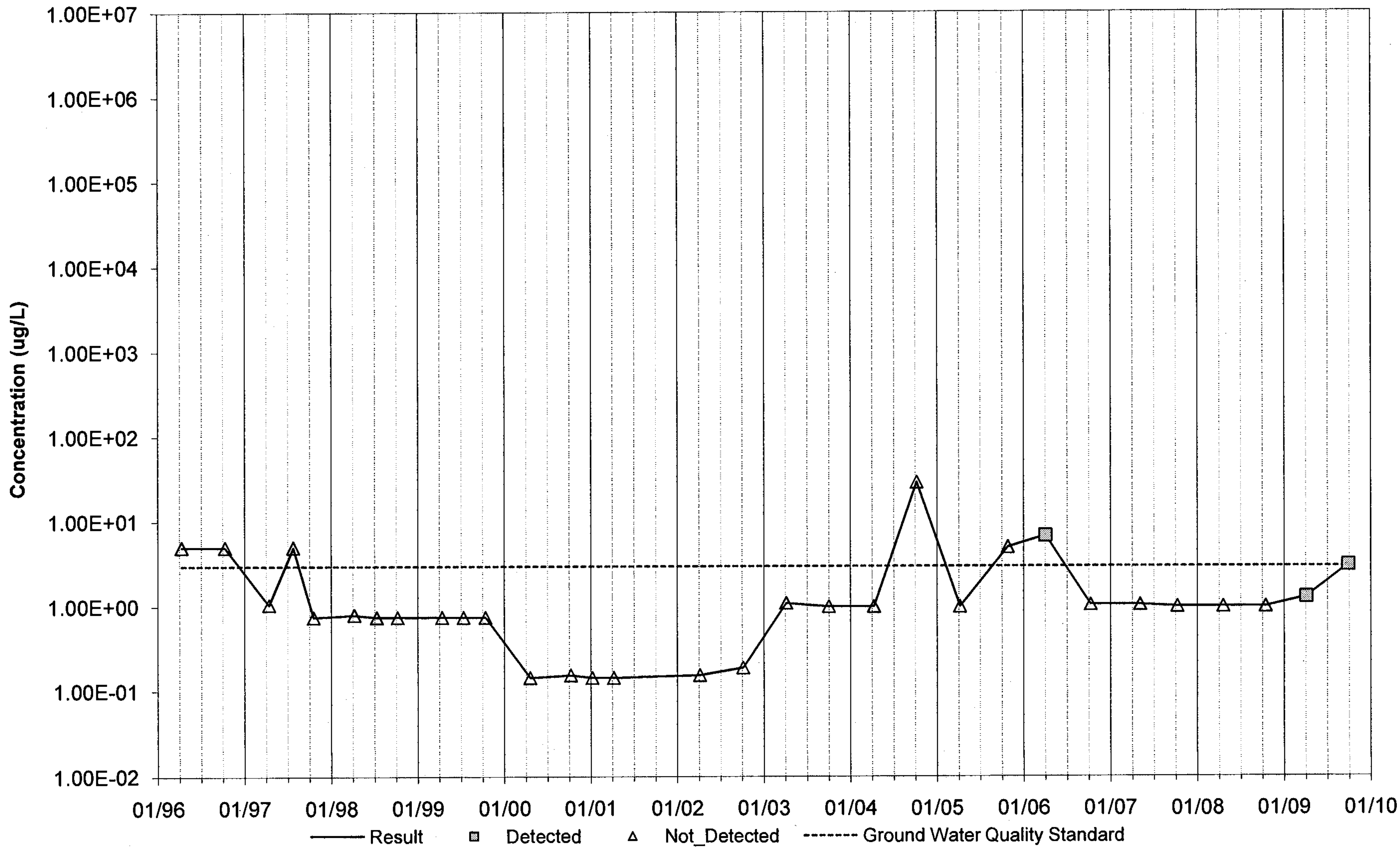


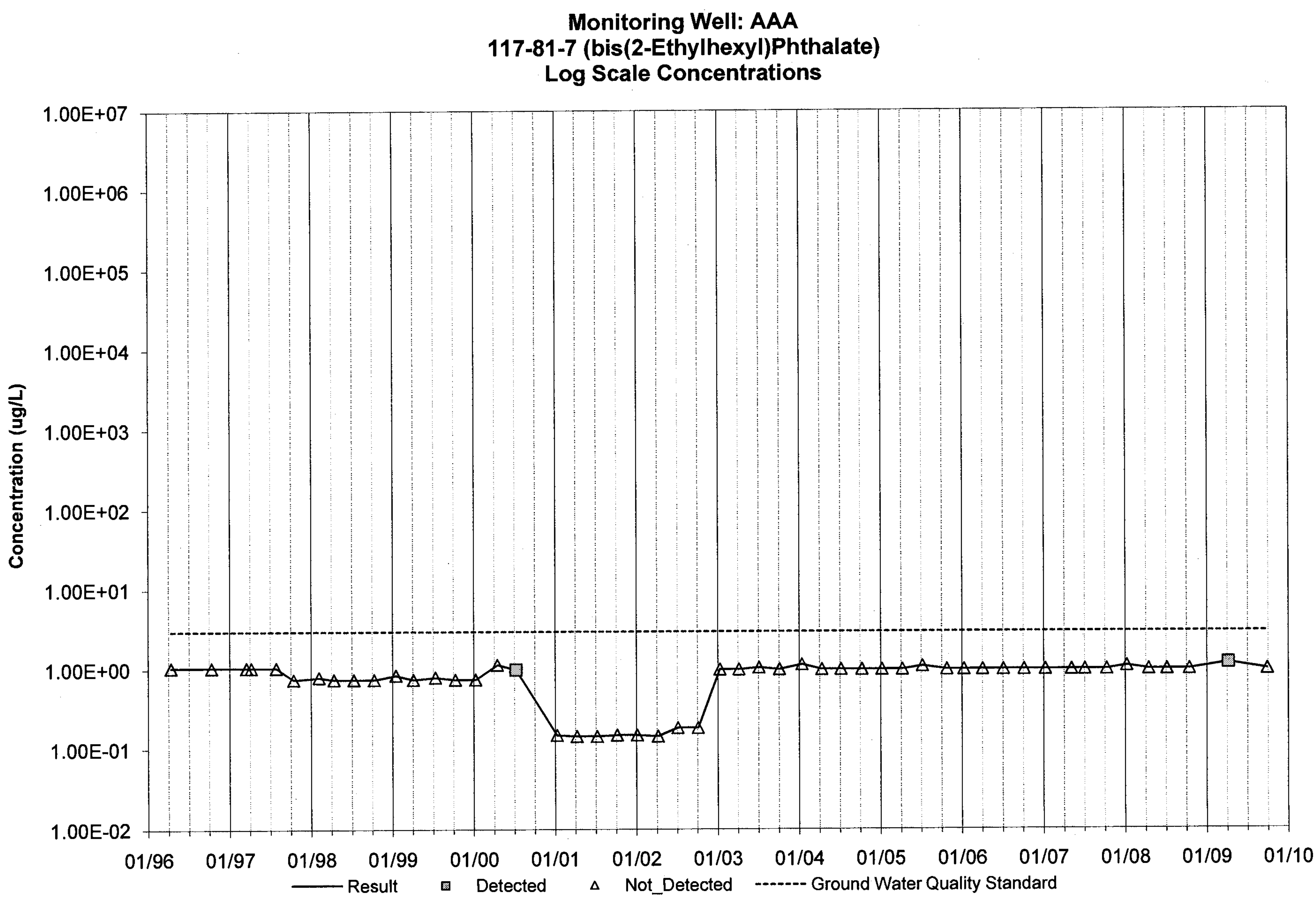

Monitoring Well: 28R
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: 34R
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations



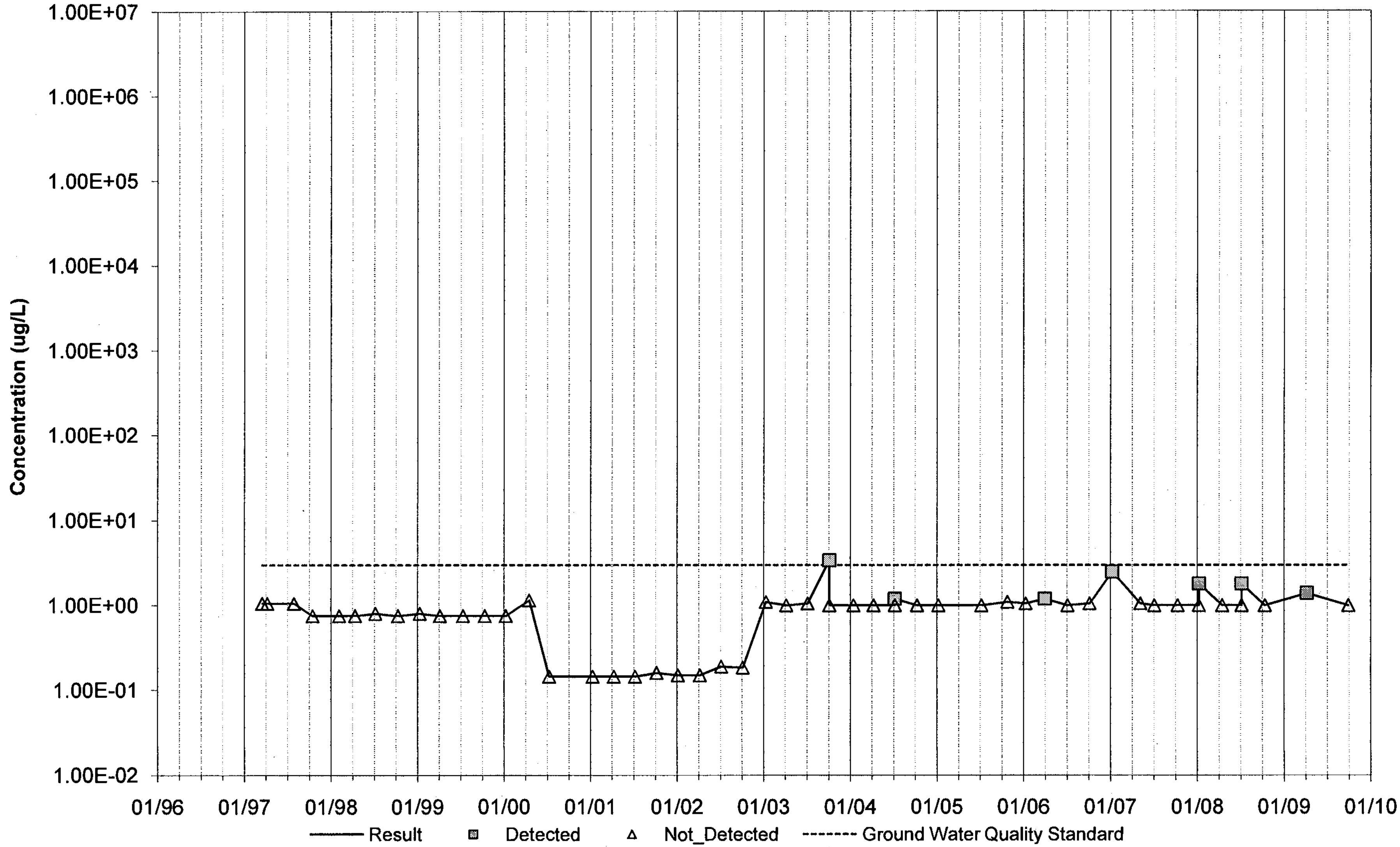
Monitoring Well: 38R
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations



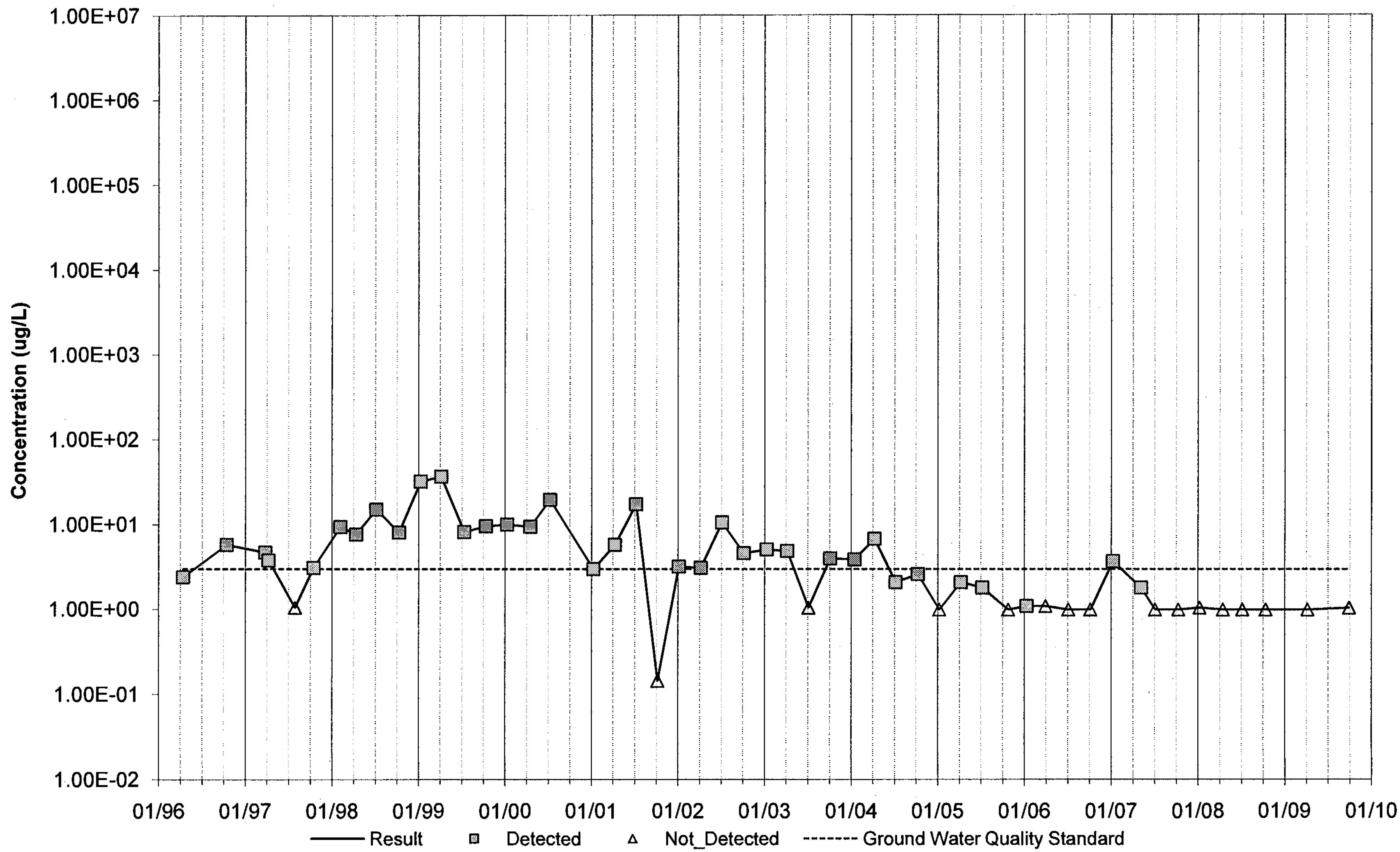


Monitoring Well: AAA
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

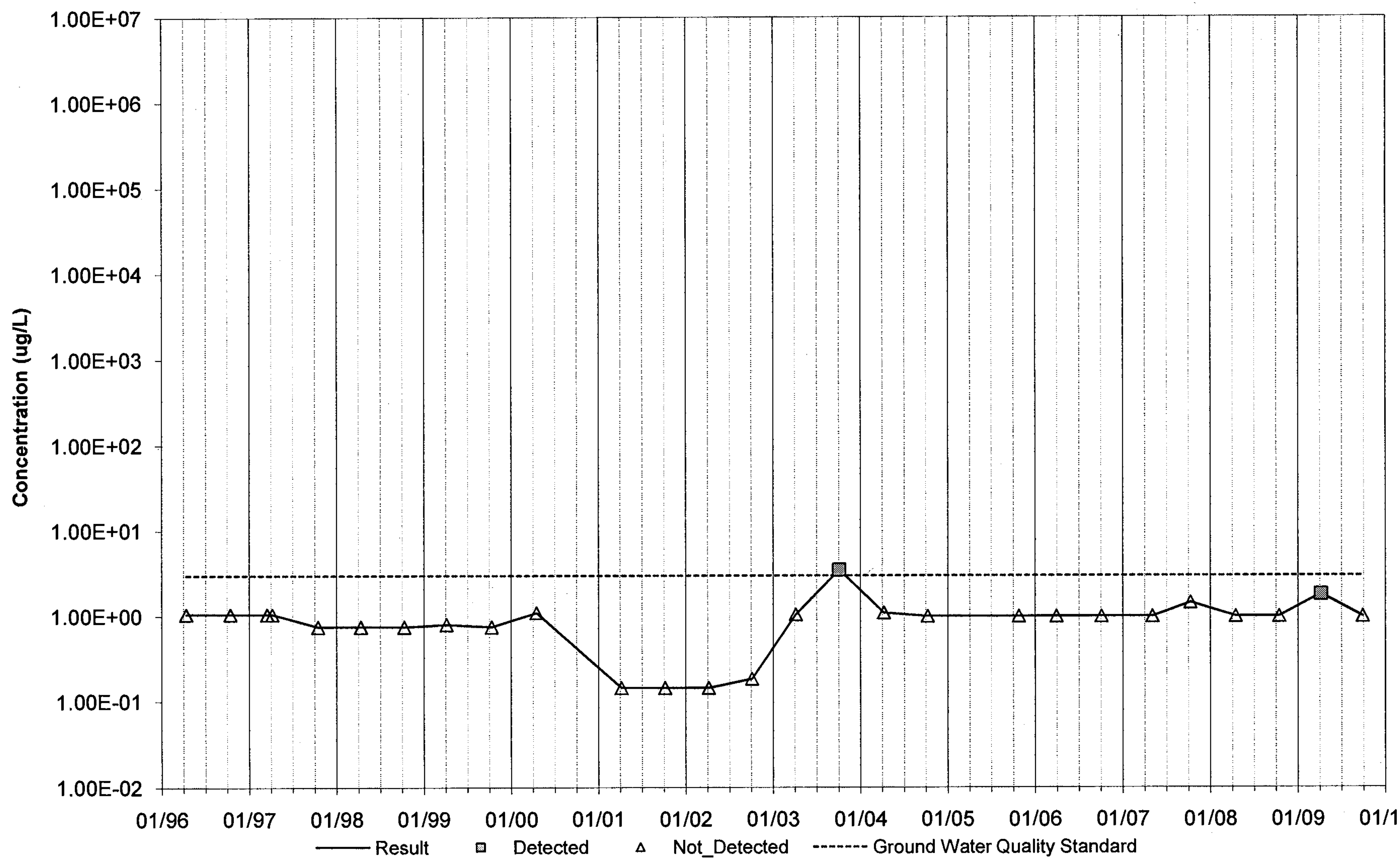
Monitoring Well: CCC-R
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations



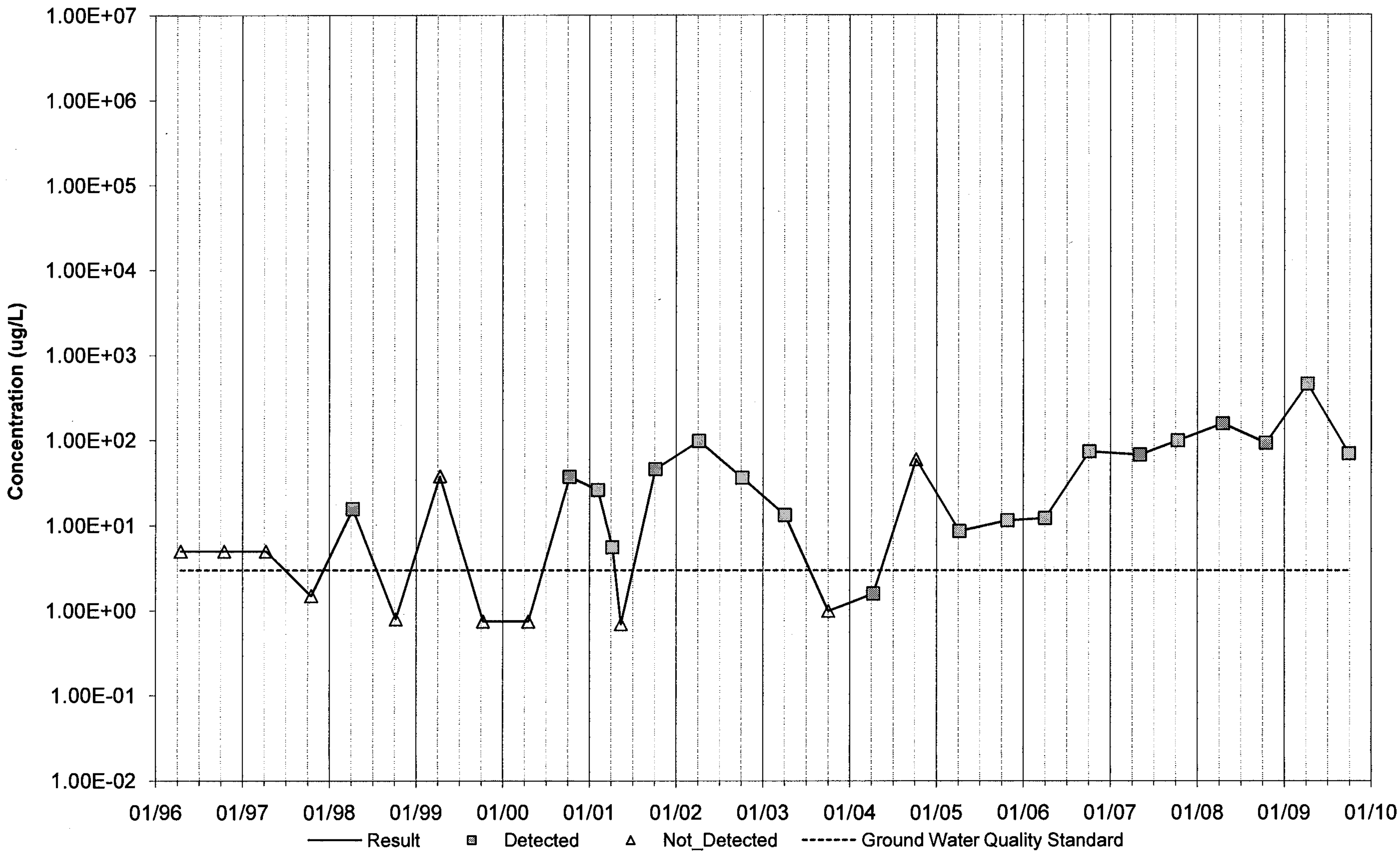
Monitoring Well: EEE-R
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations

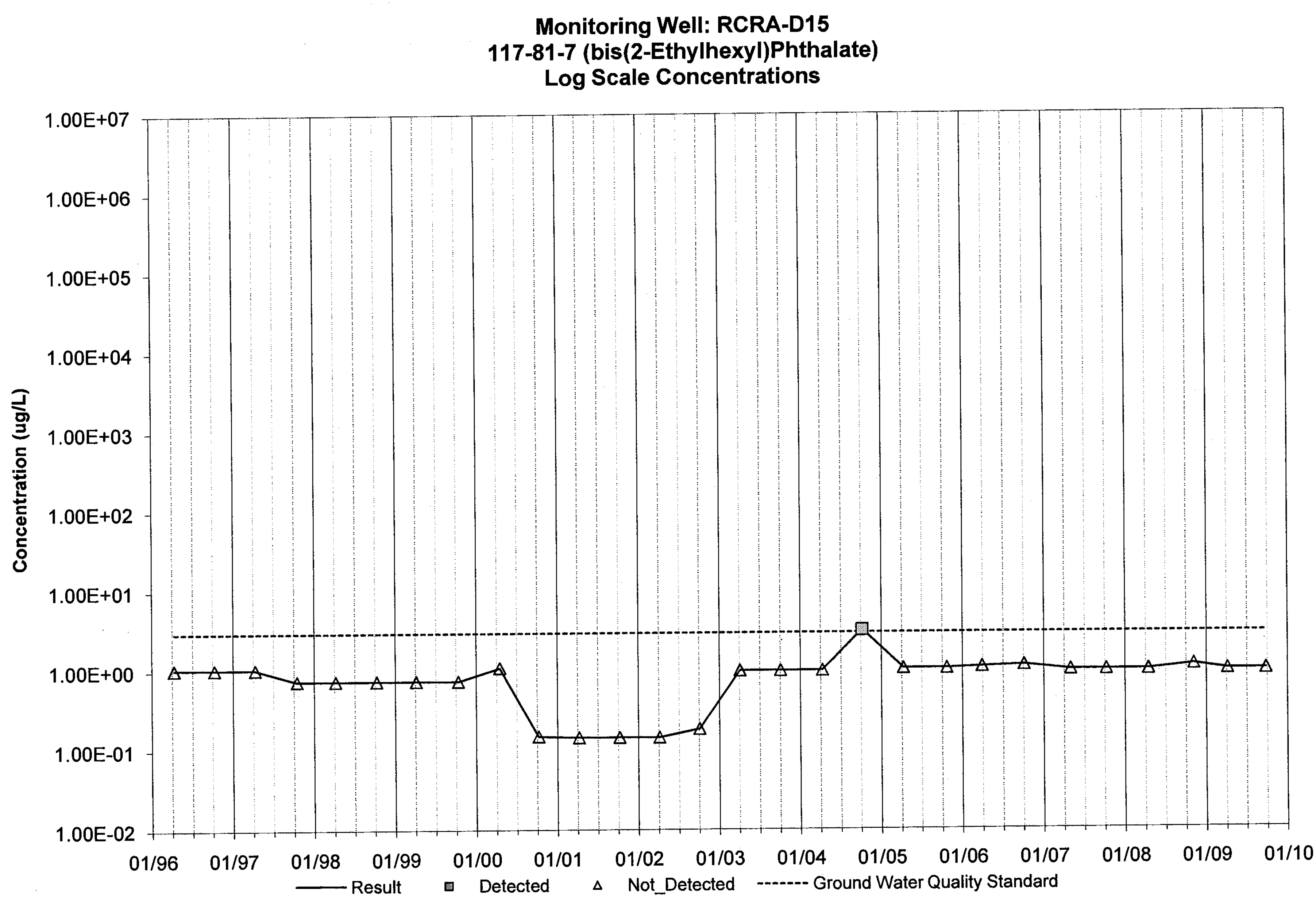


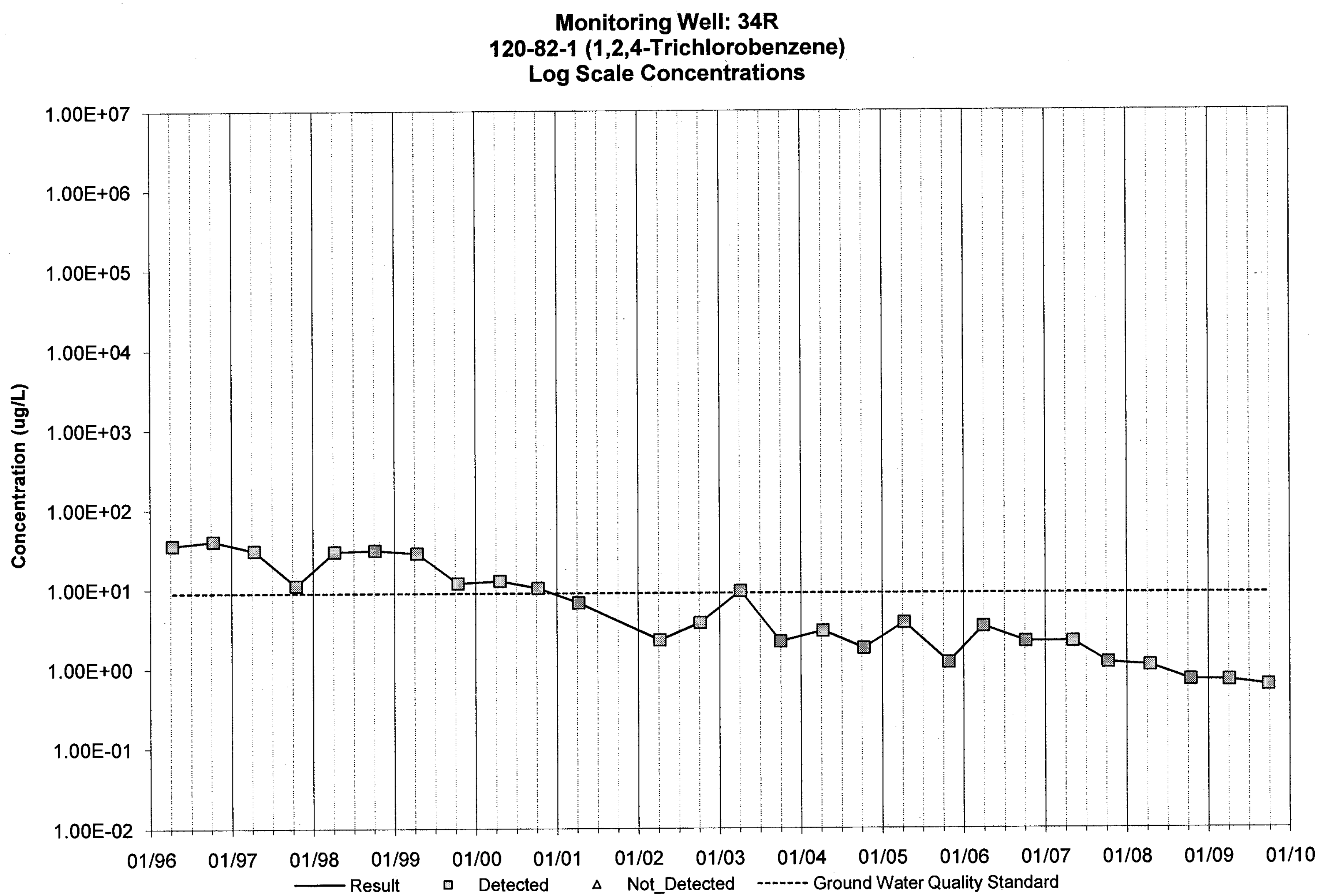
Monitoring Well: KKK
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations



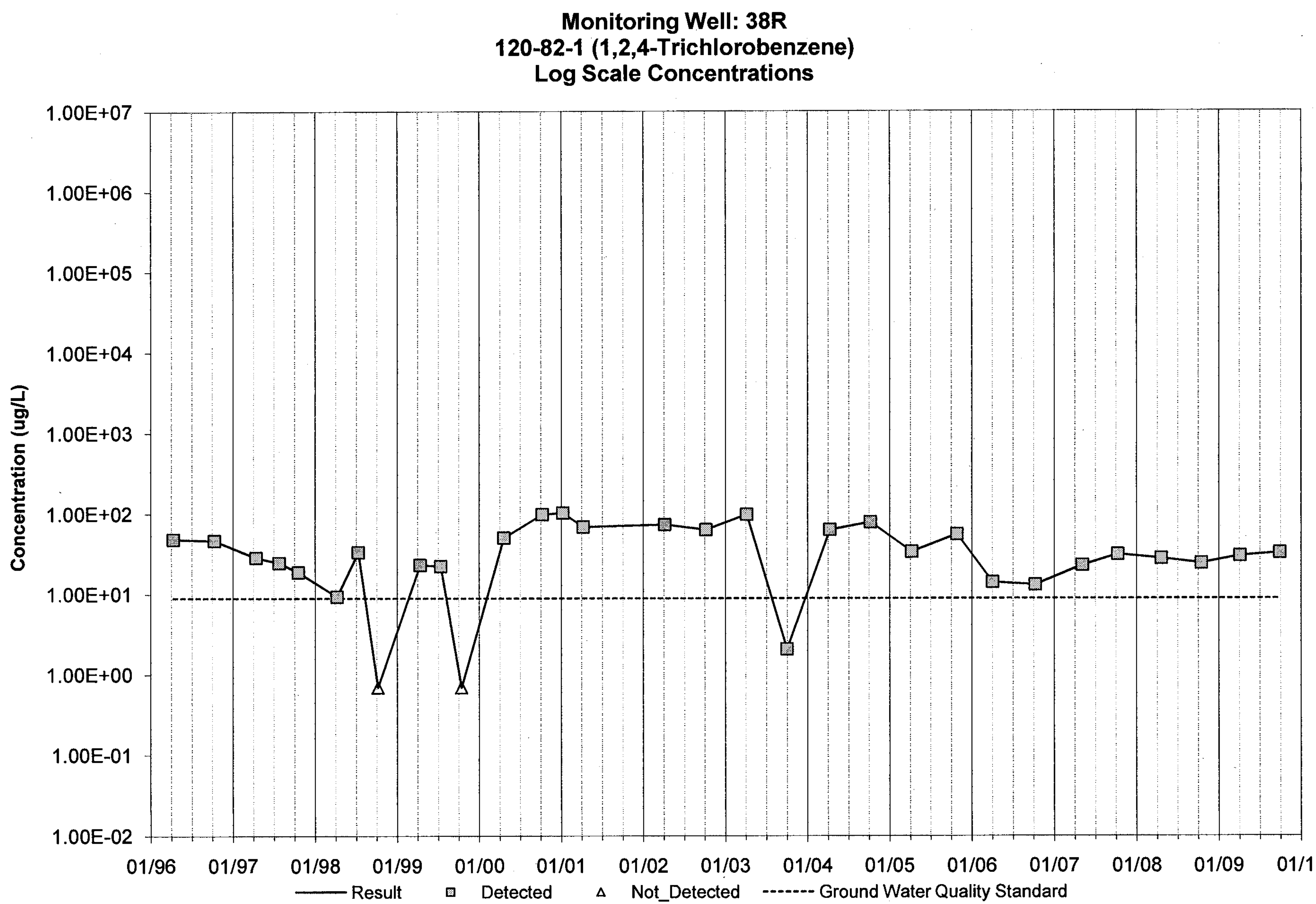
Monitoring Well: MW-2
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations




Monitoring Well: RCRA-D15
117-81-7 (bis(2-Ethylhexyl)Phthalate)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

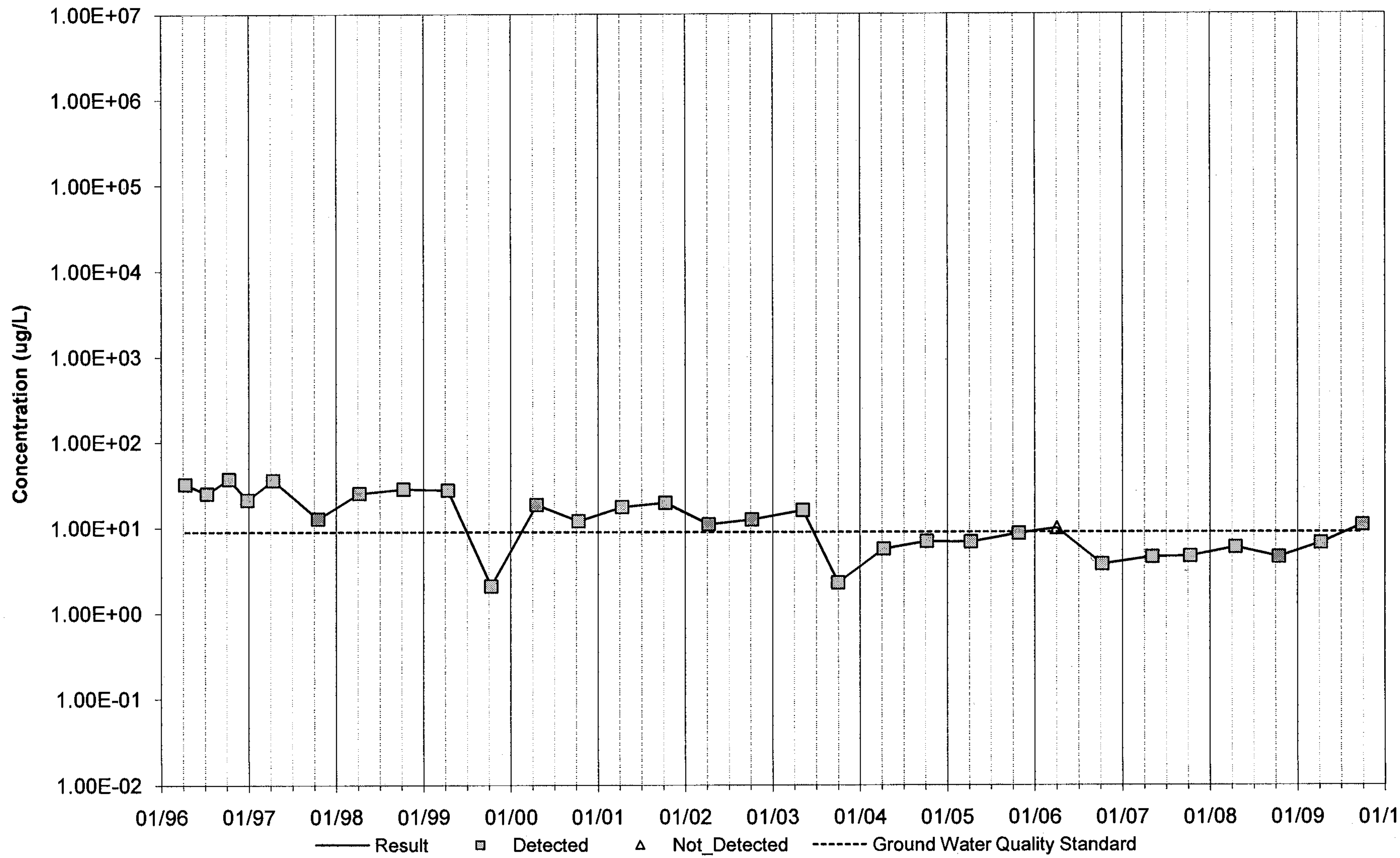


Monitoring Well: 34R
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

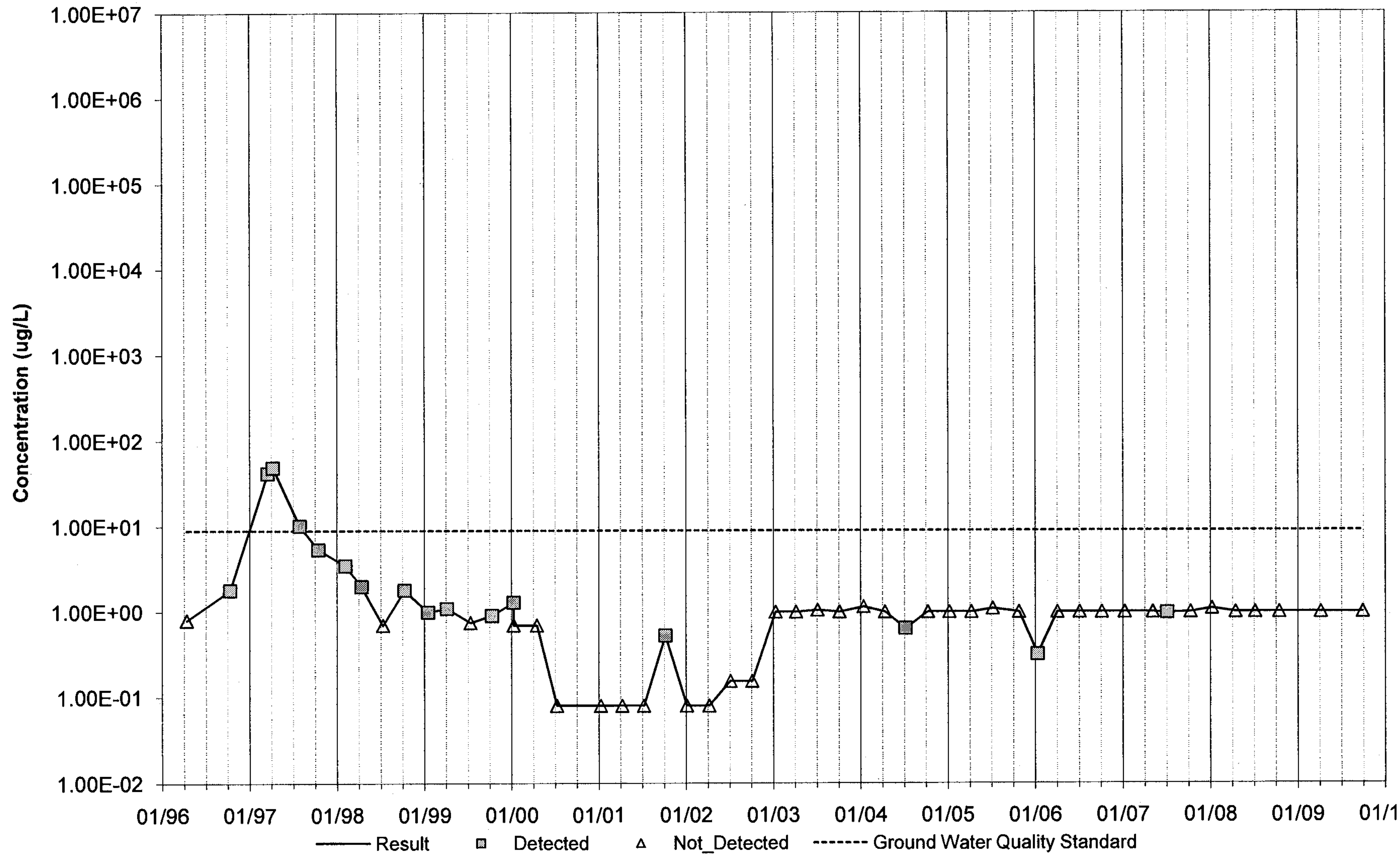


Monitoring Well: 38R
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

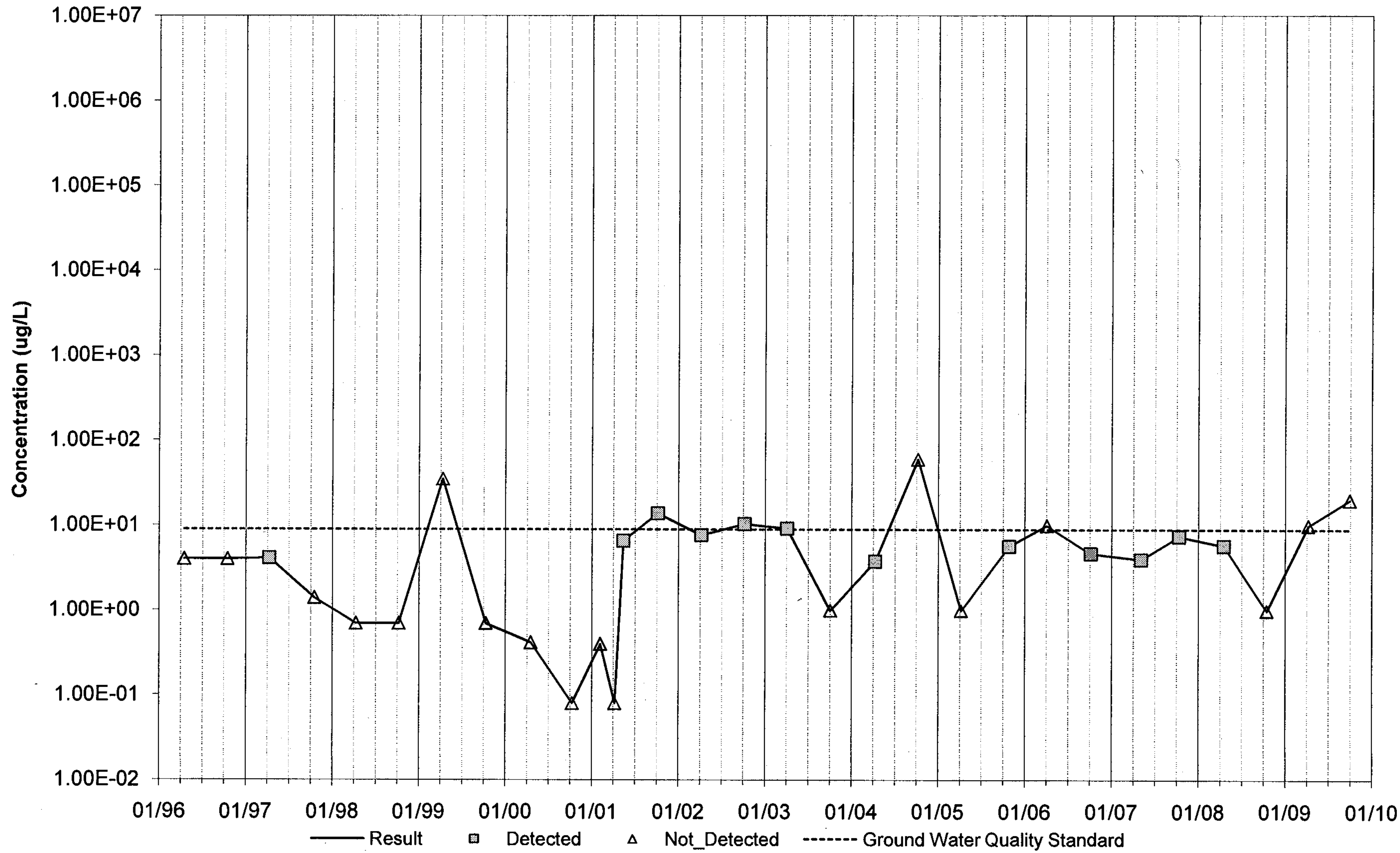
Monitoring Well: 42R
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations



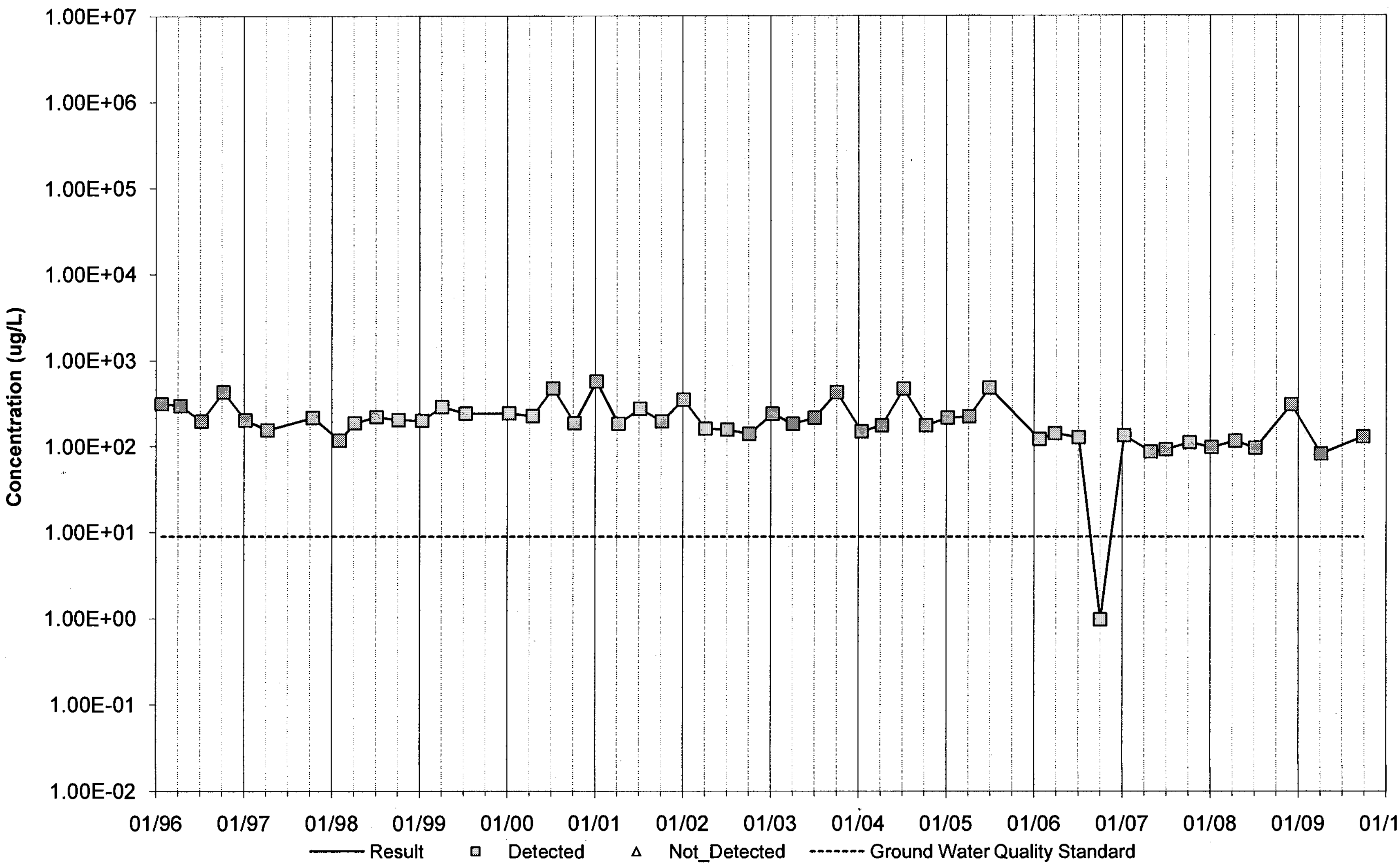
Monitoring Well: AAA
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations

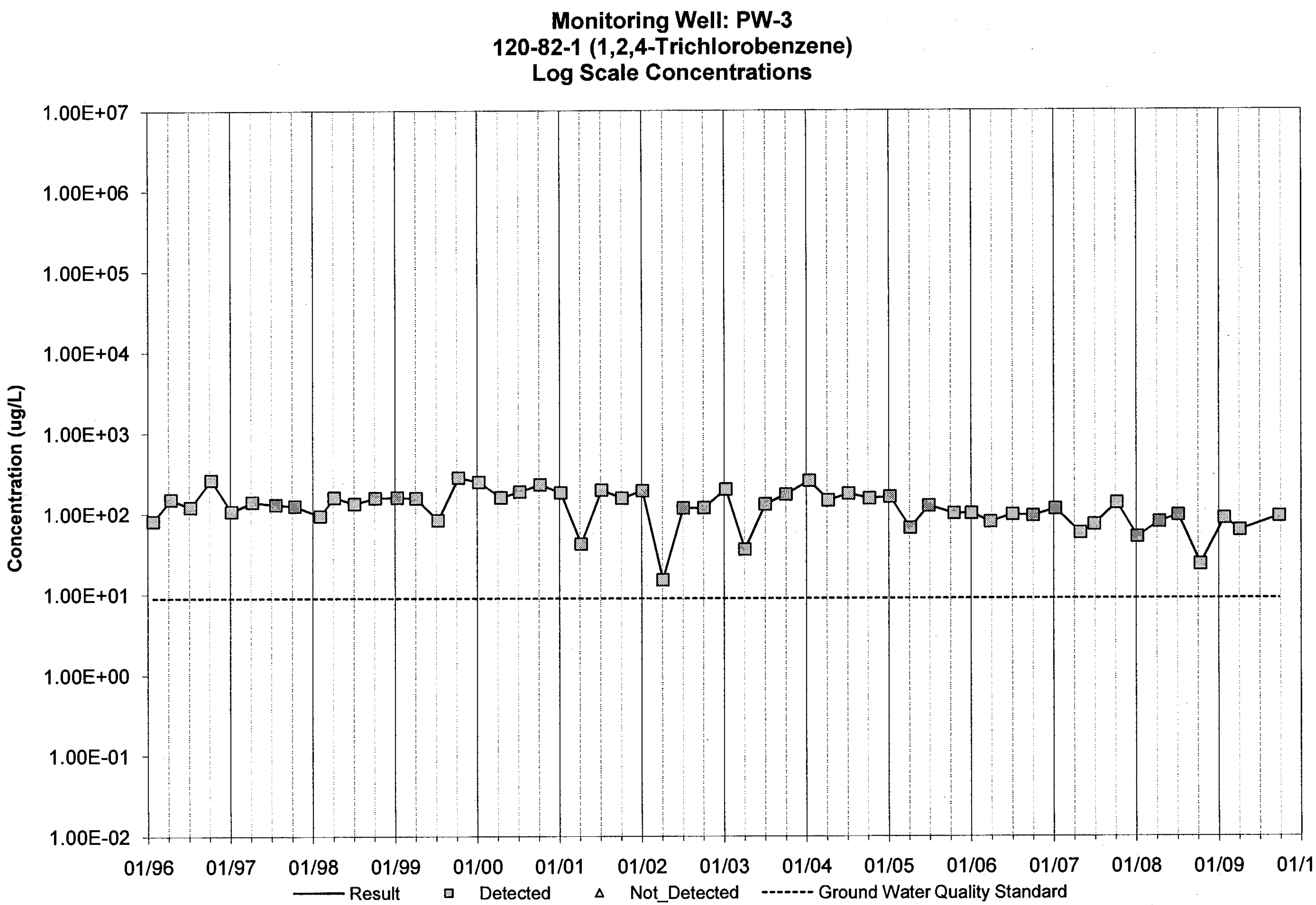


Monitoring Well: MW-2
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations



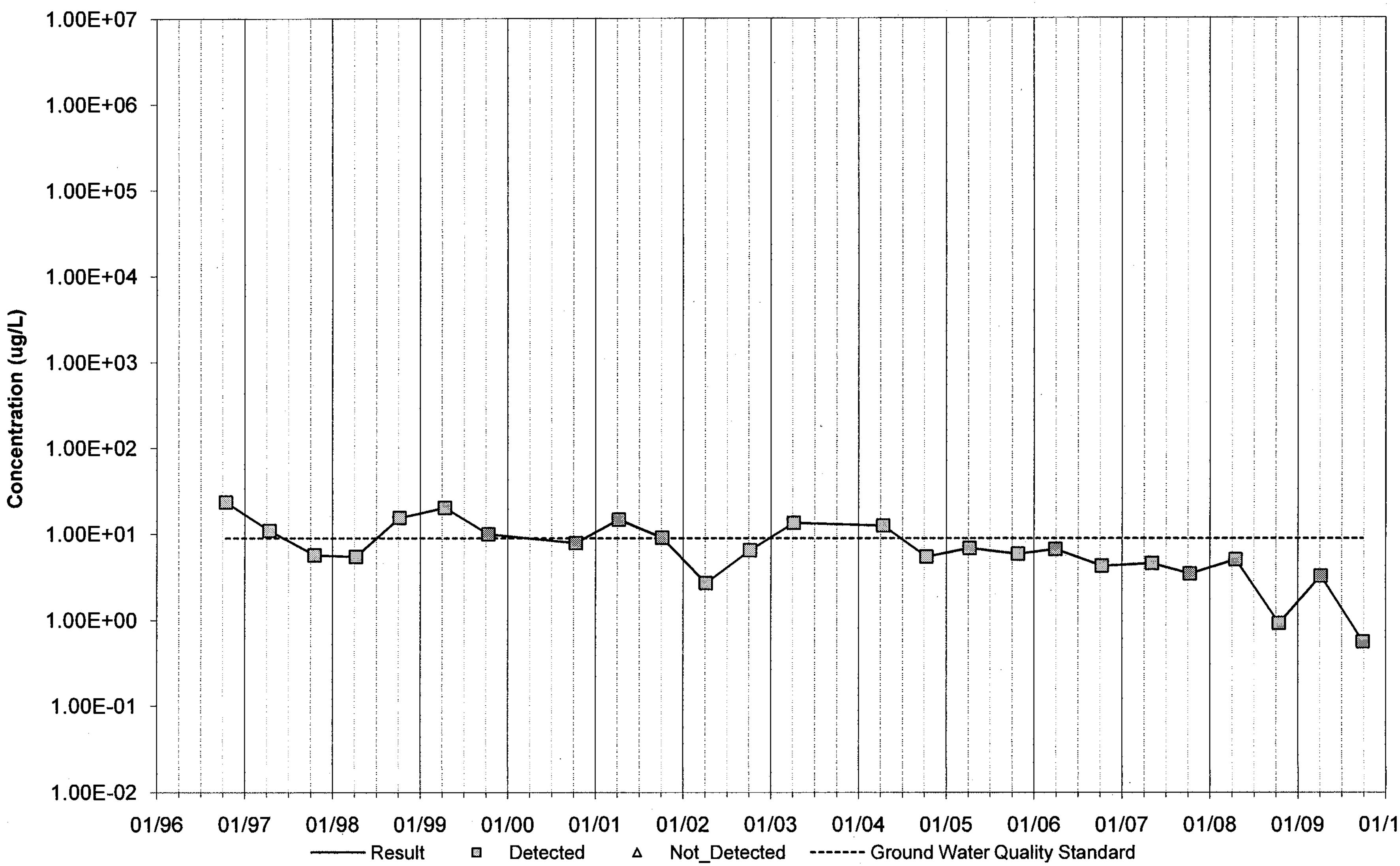
Monitoring Well: PW-2
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations



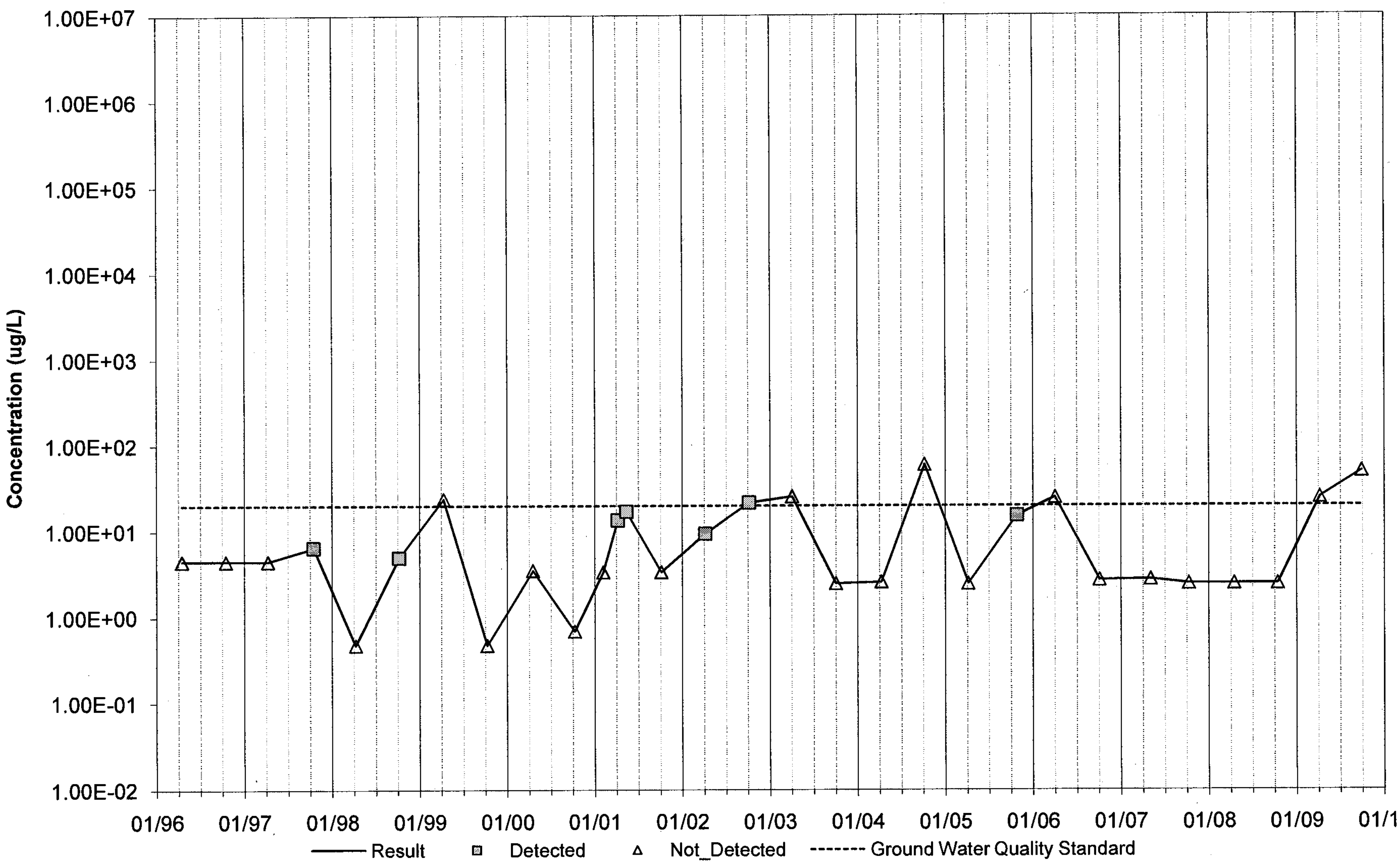


Monitoring Well: PW-3
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

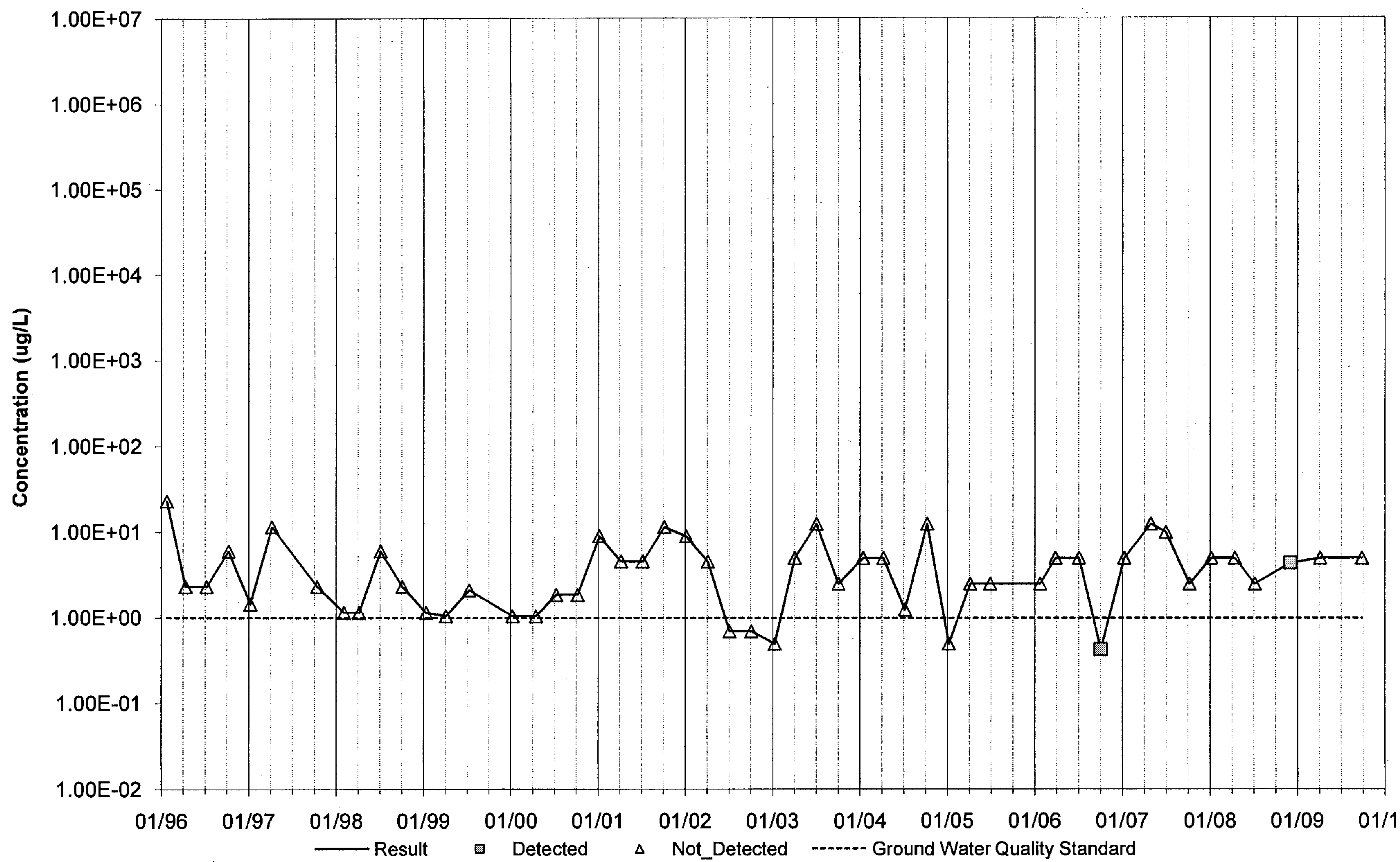
Monitoring Well: TFP-94-1R
120-82-1 (1,2,4-Trichlorobenzene)
Log Scale Concentrations



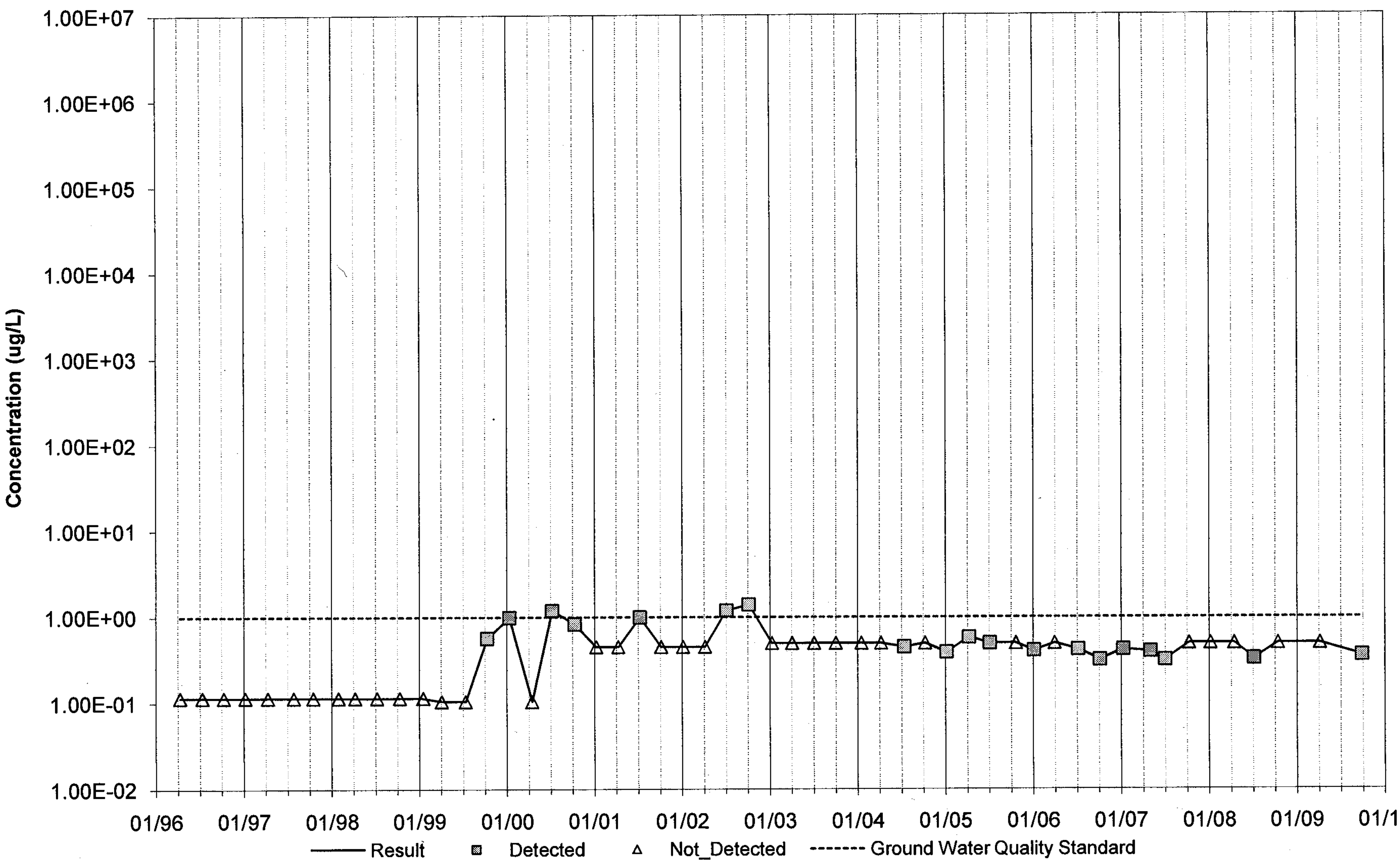
Monitoring Well: MW-2
120-83-2 (2,4-Dichlorophenol)
Log Scale Concentrations



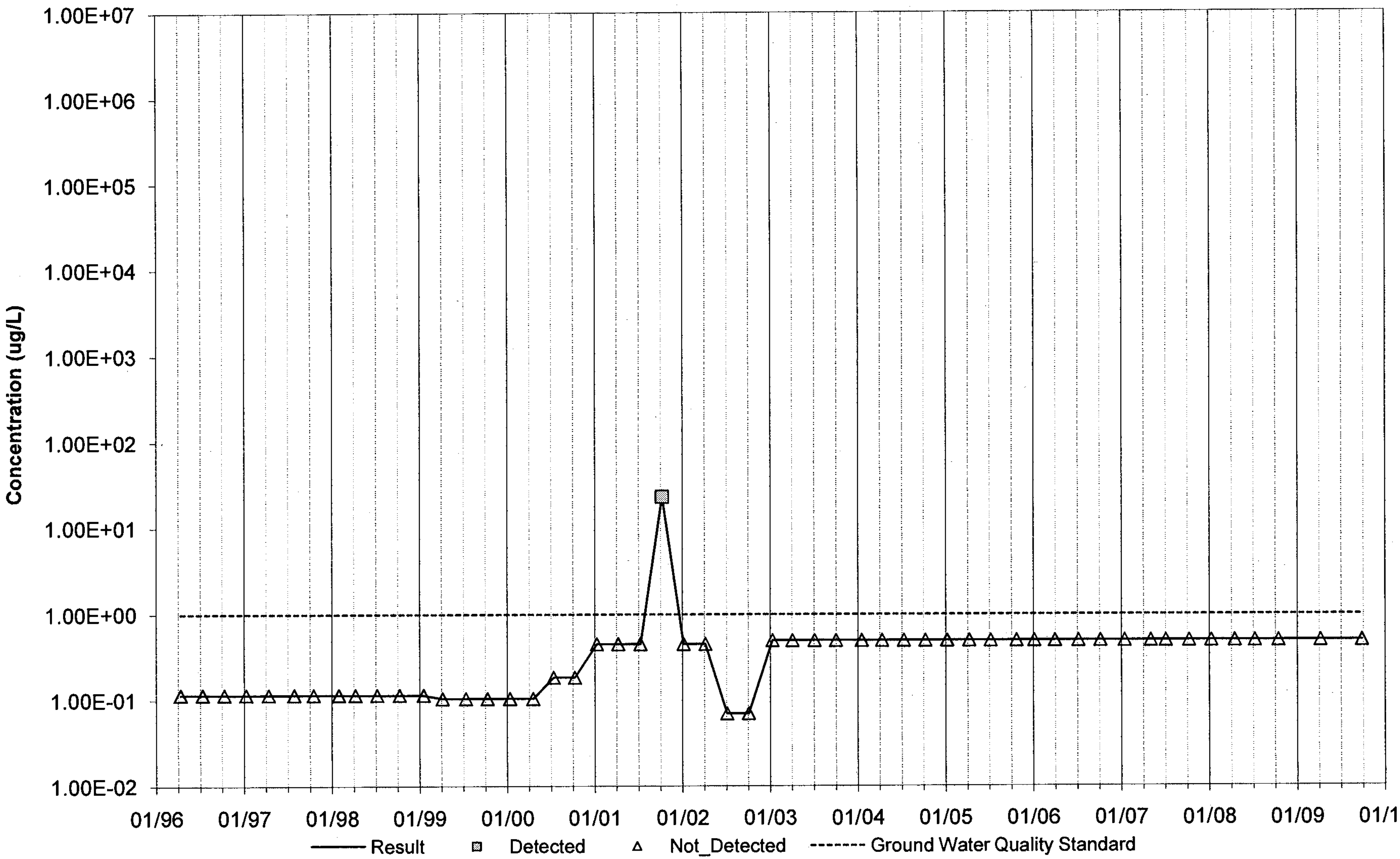
Monitoring Well: PW-2
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



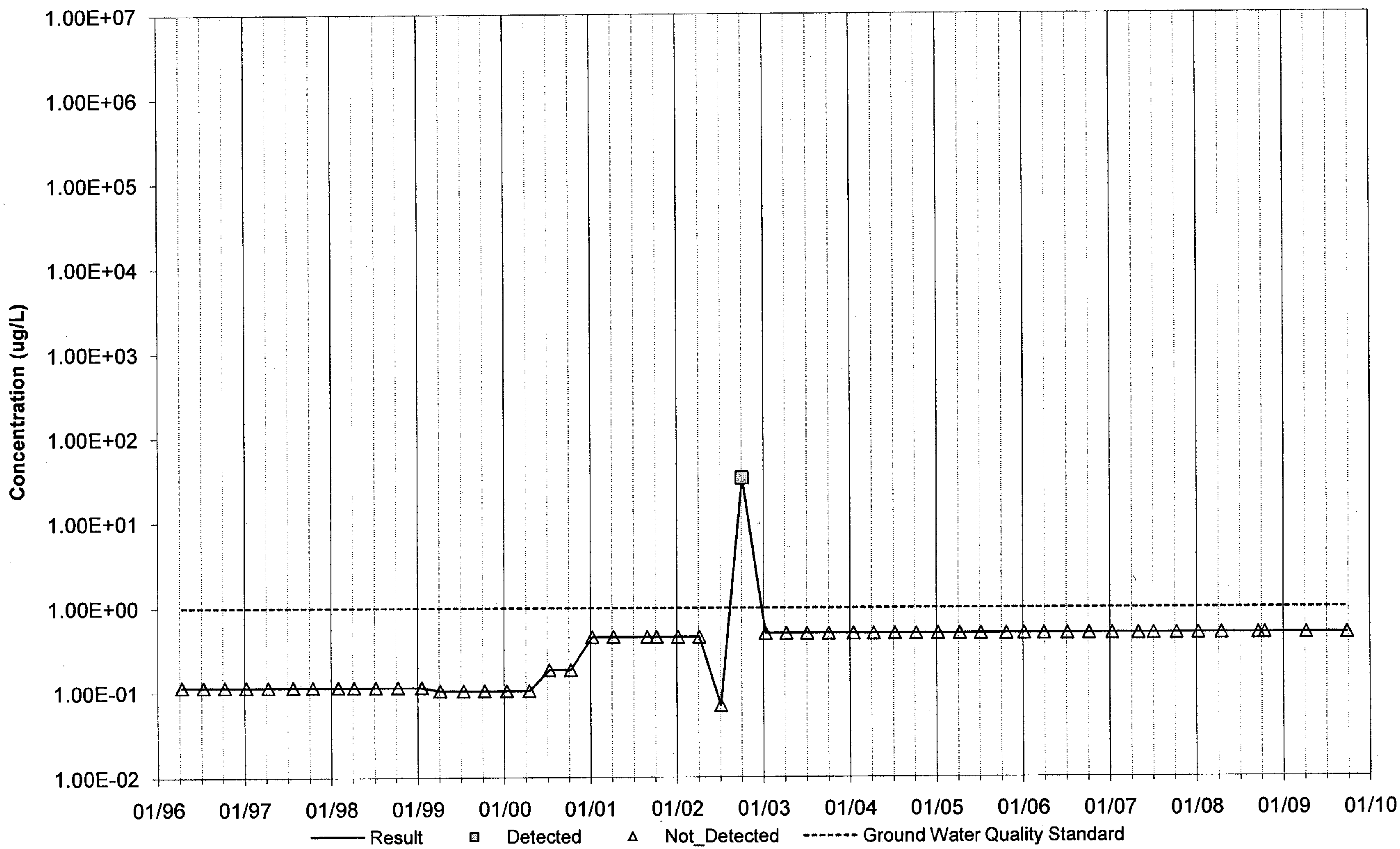
Monitoring Well: RCRA-D10
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



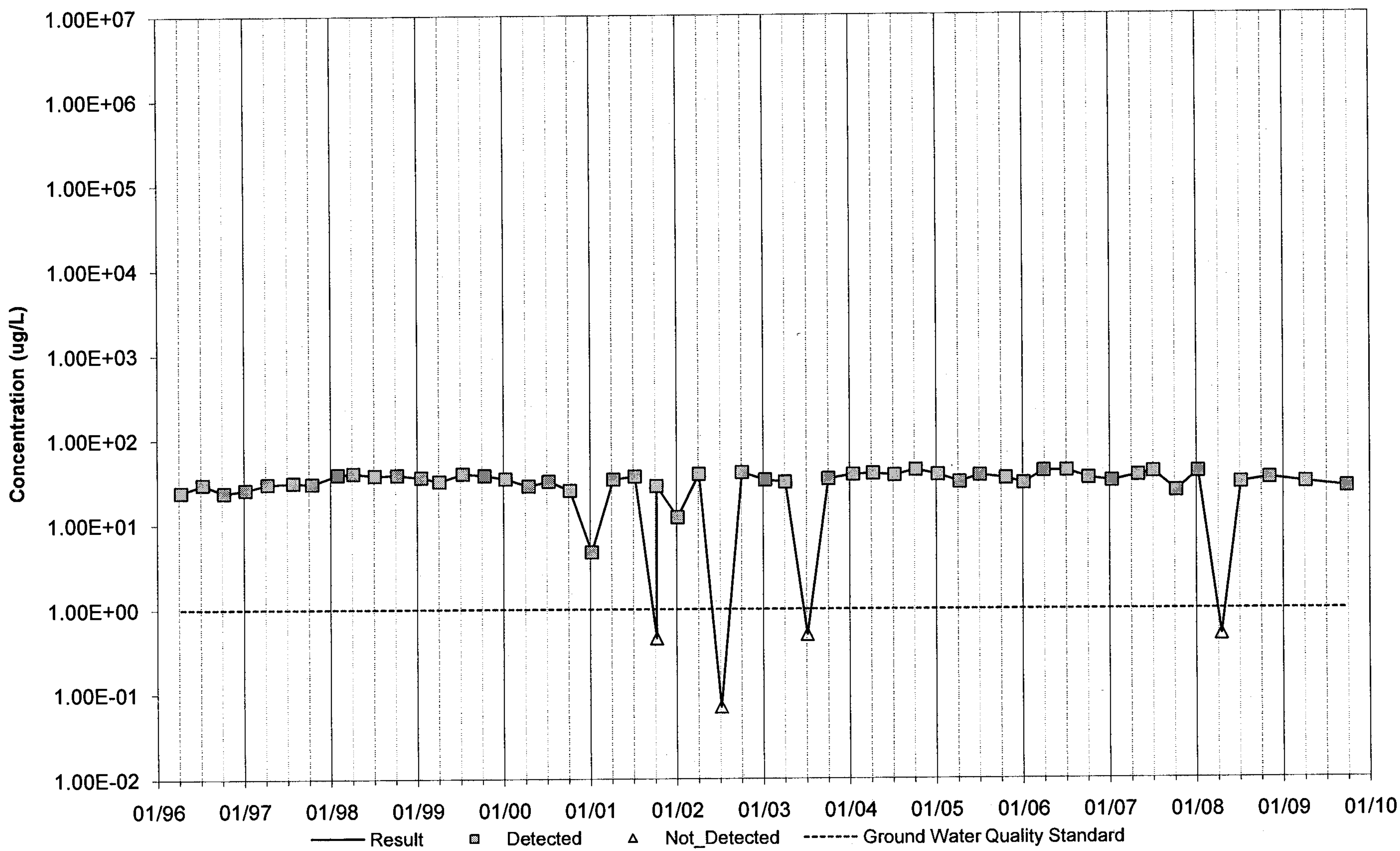
Monitoring Well: RCRA-D11
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



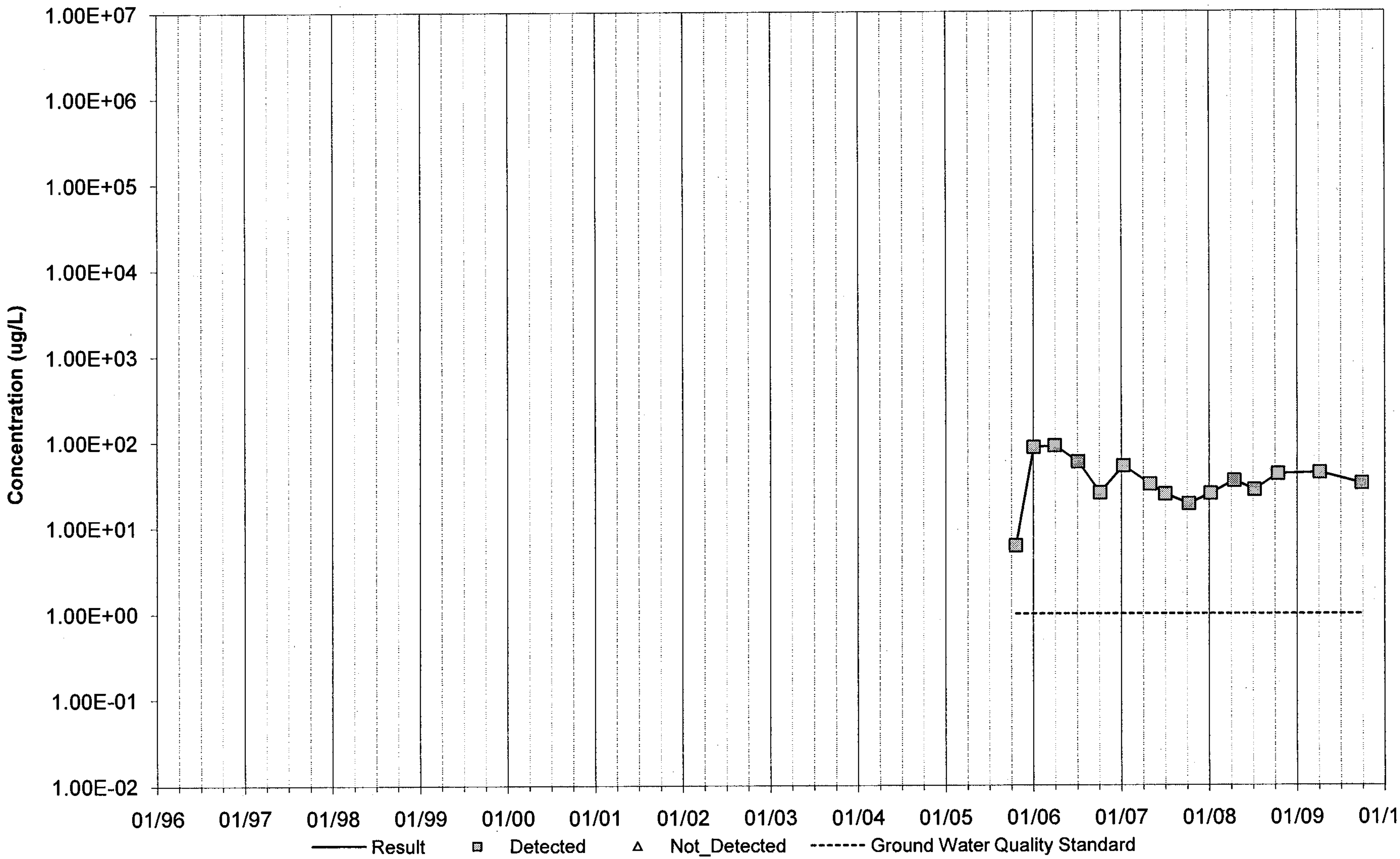
Monitoring Well: RCRA-D13
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



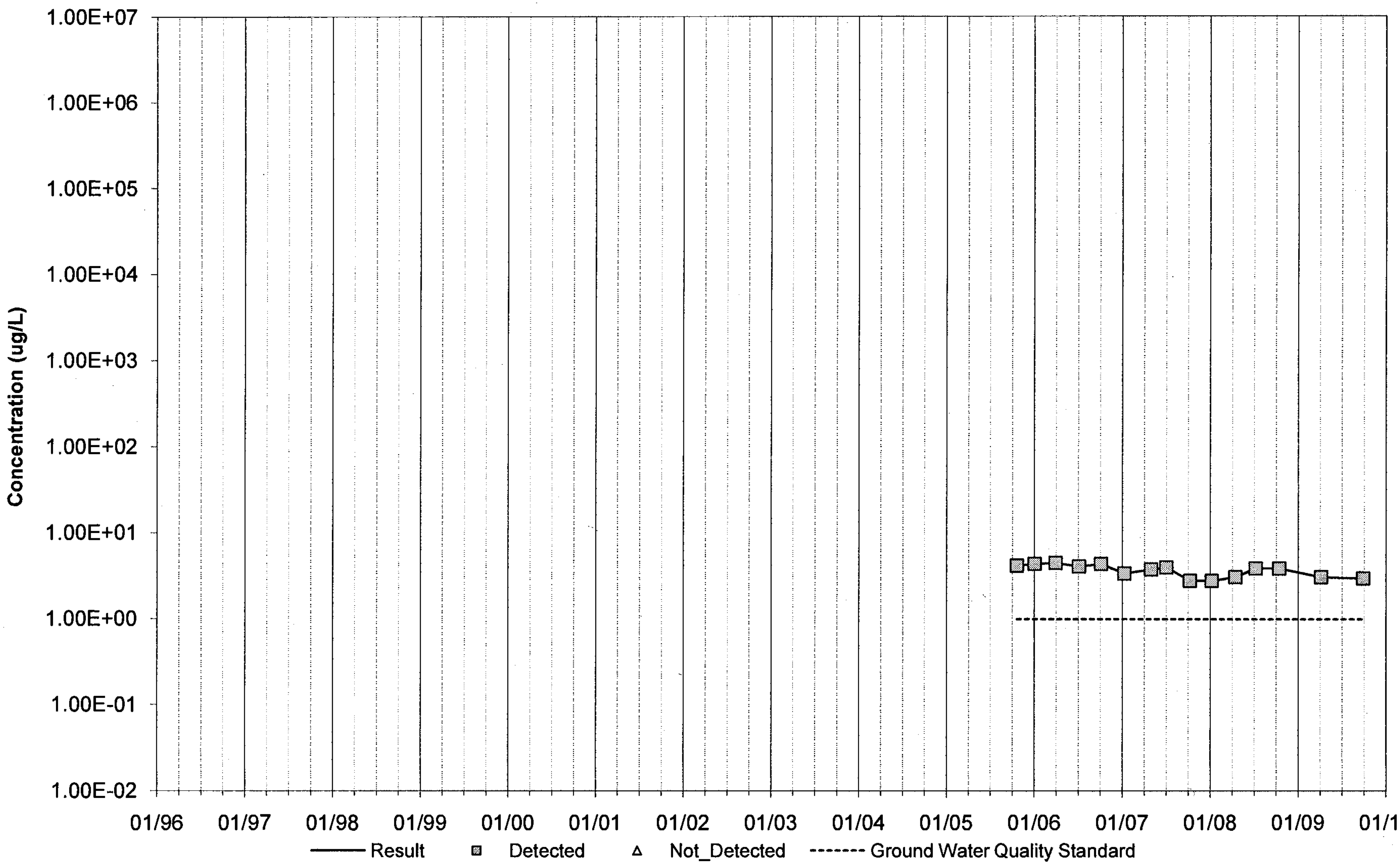
Monitoring Well: RCRA-D15
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



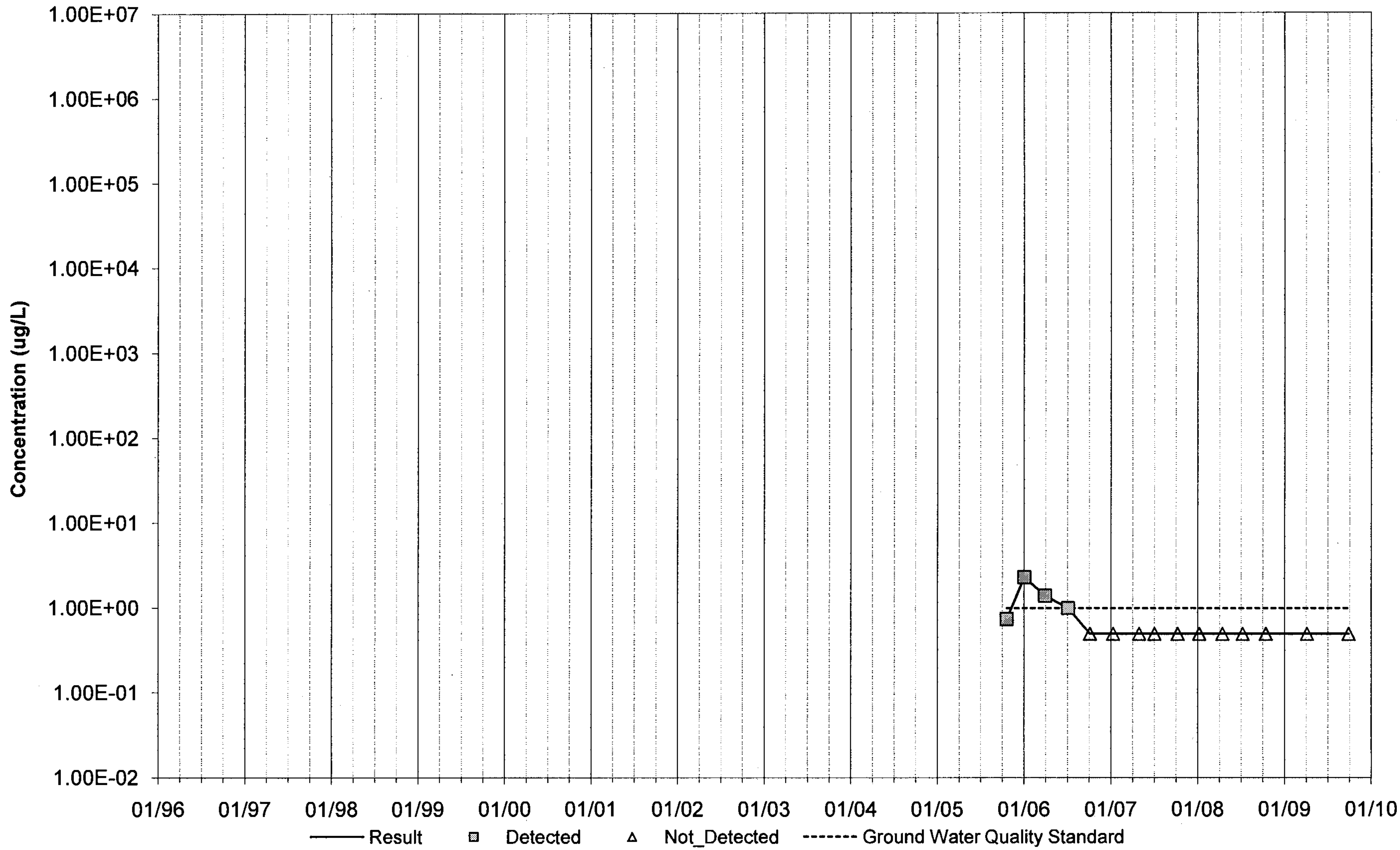
Monitoring Well: TT P1
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



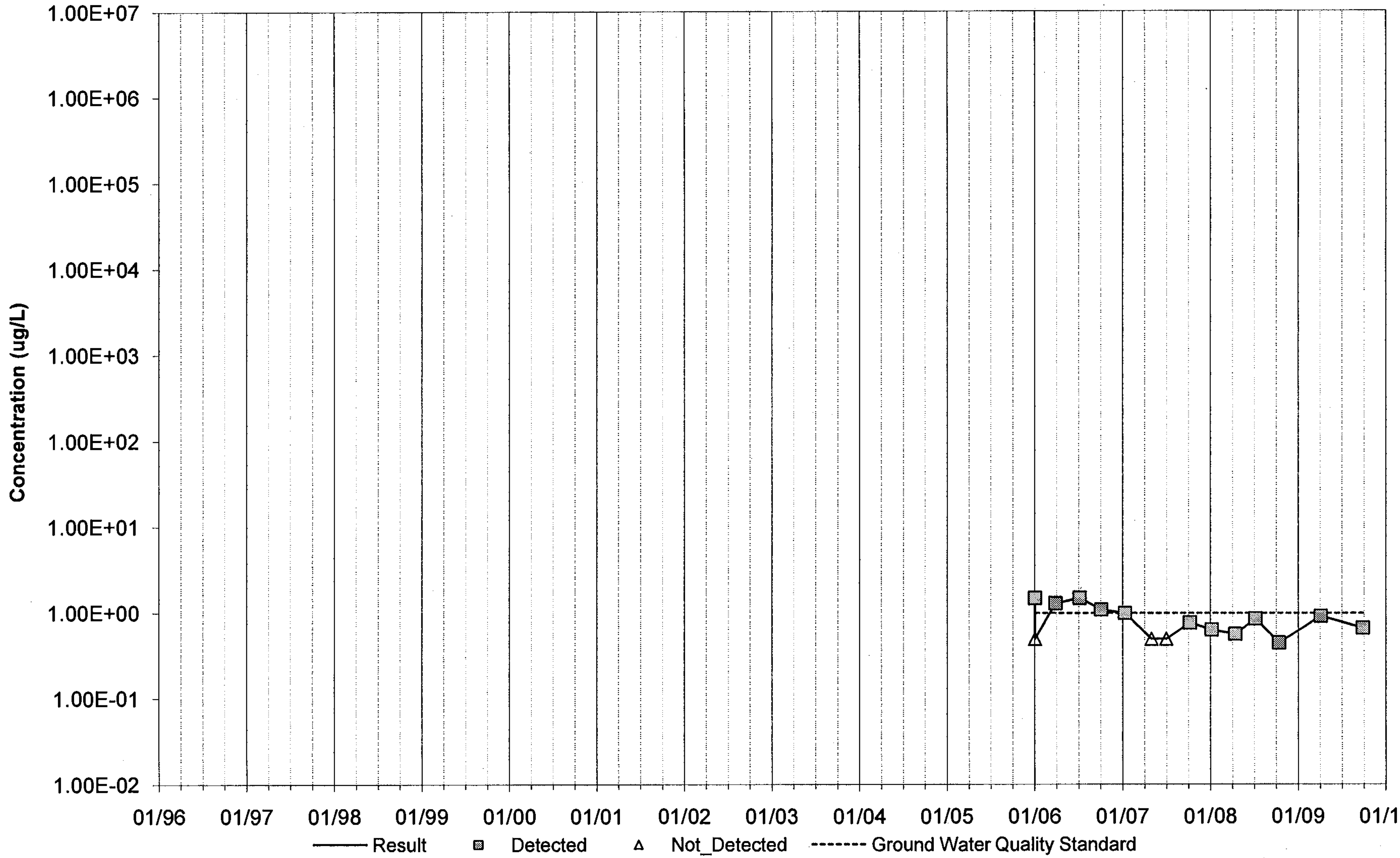
Monitoring Well: TT P2
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



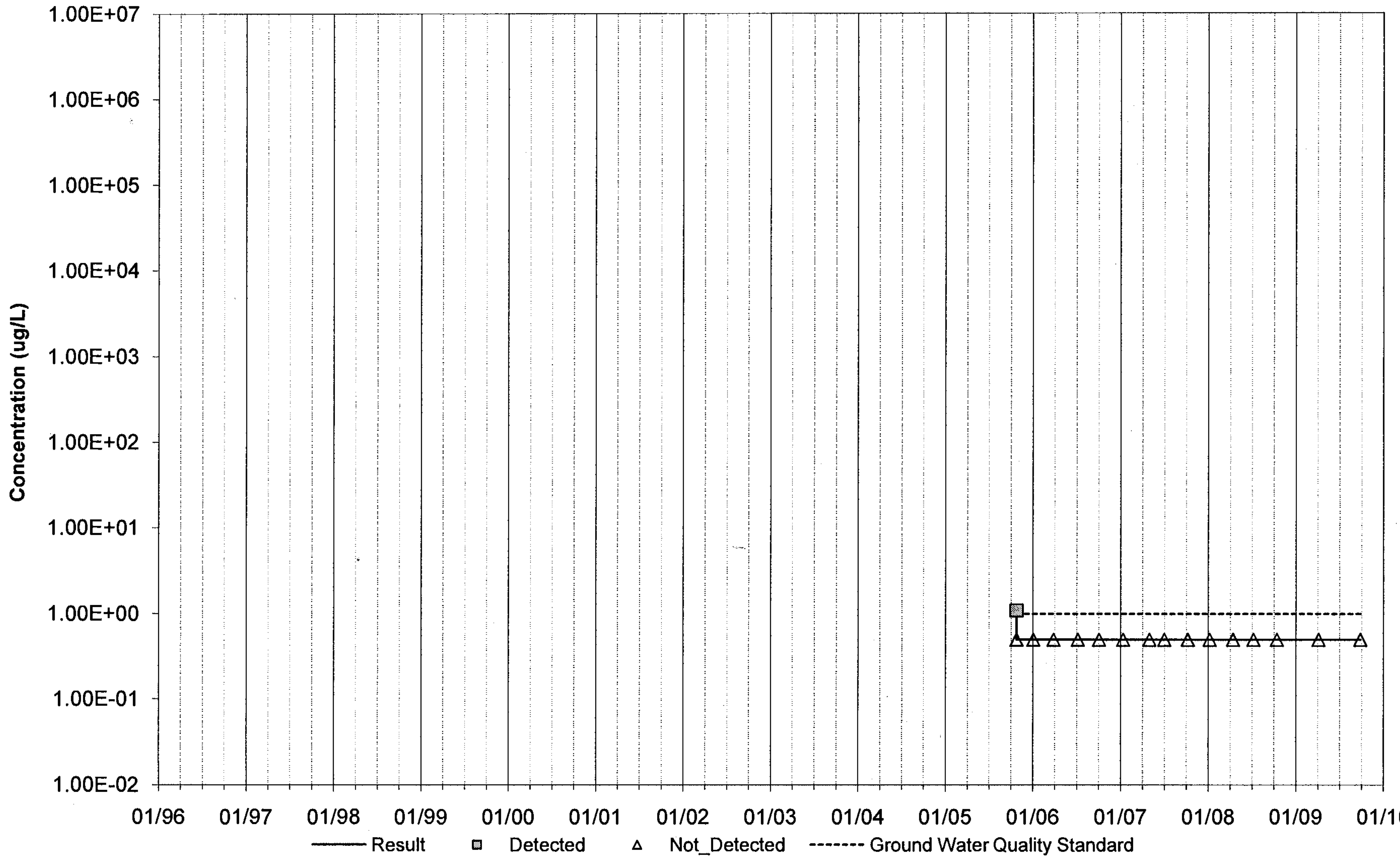
Monitoring Well: TT P3
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



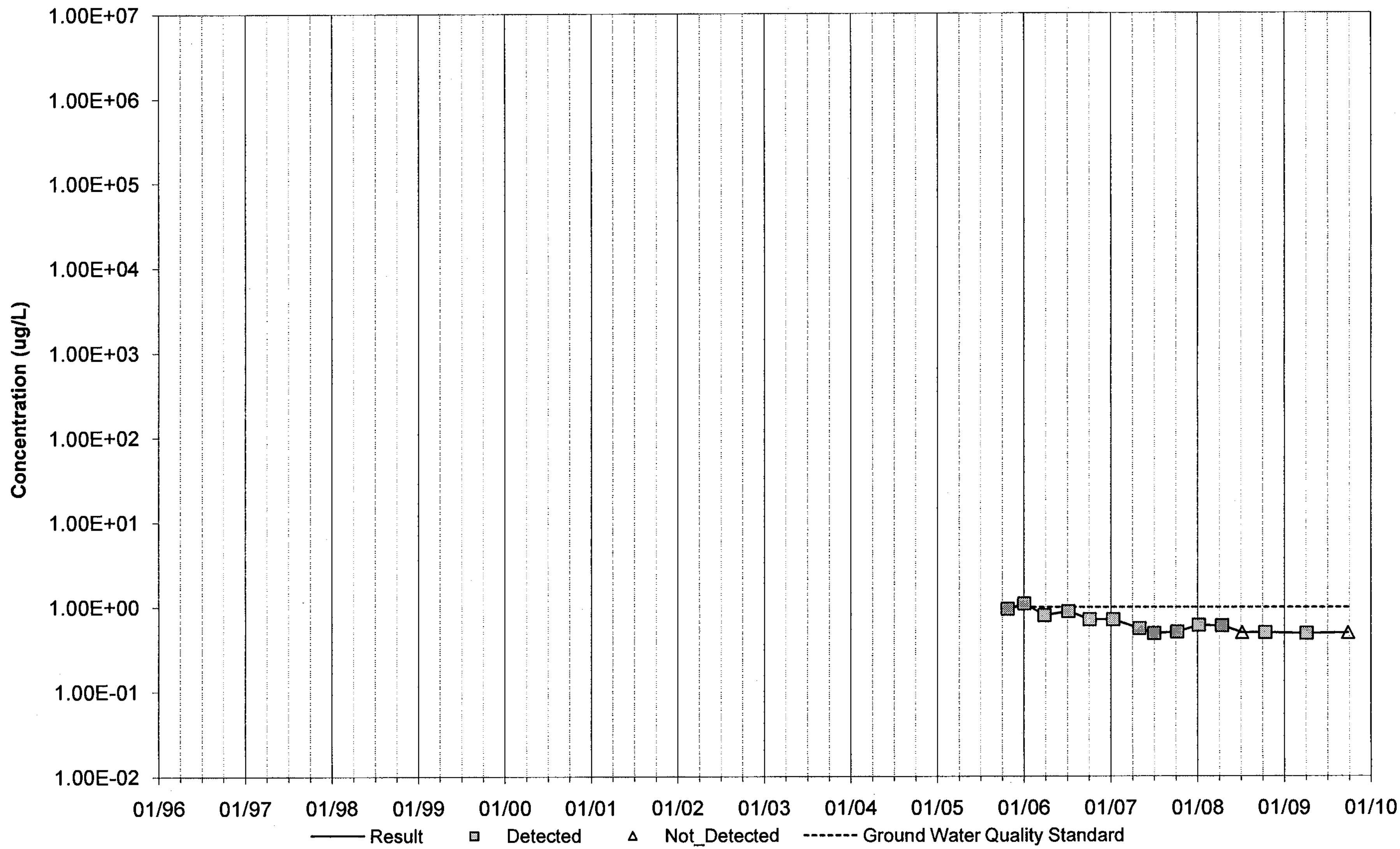
Monitoring Well: WW P1
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



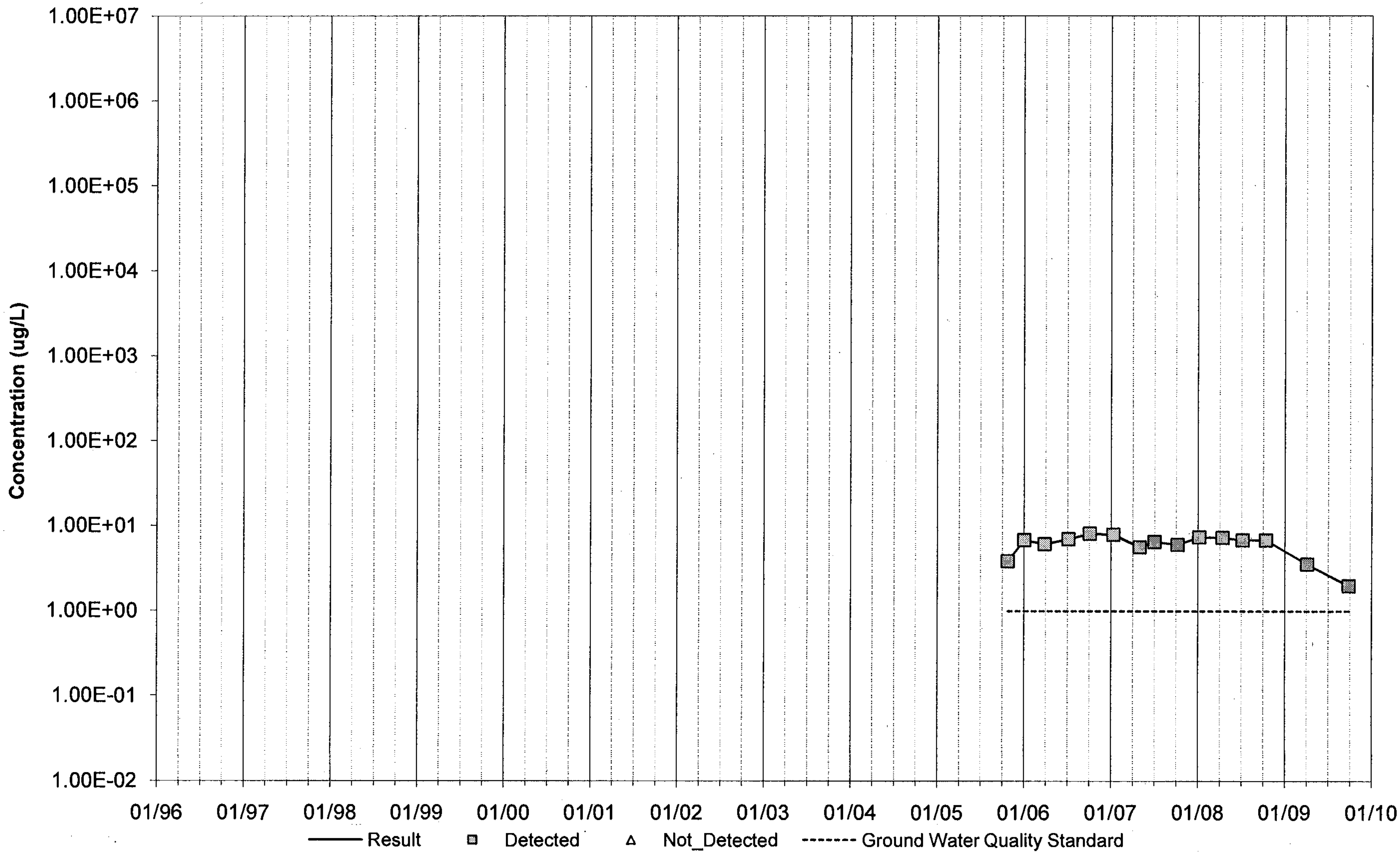
Monitoring Well: WW P3
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



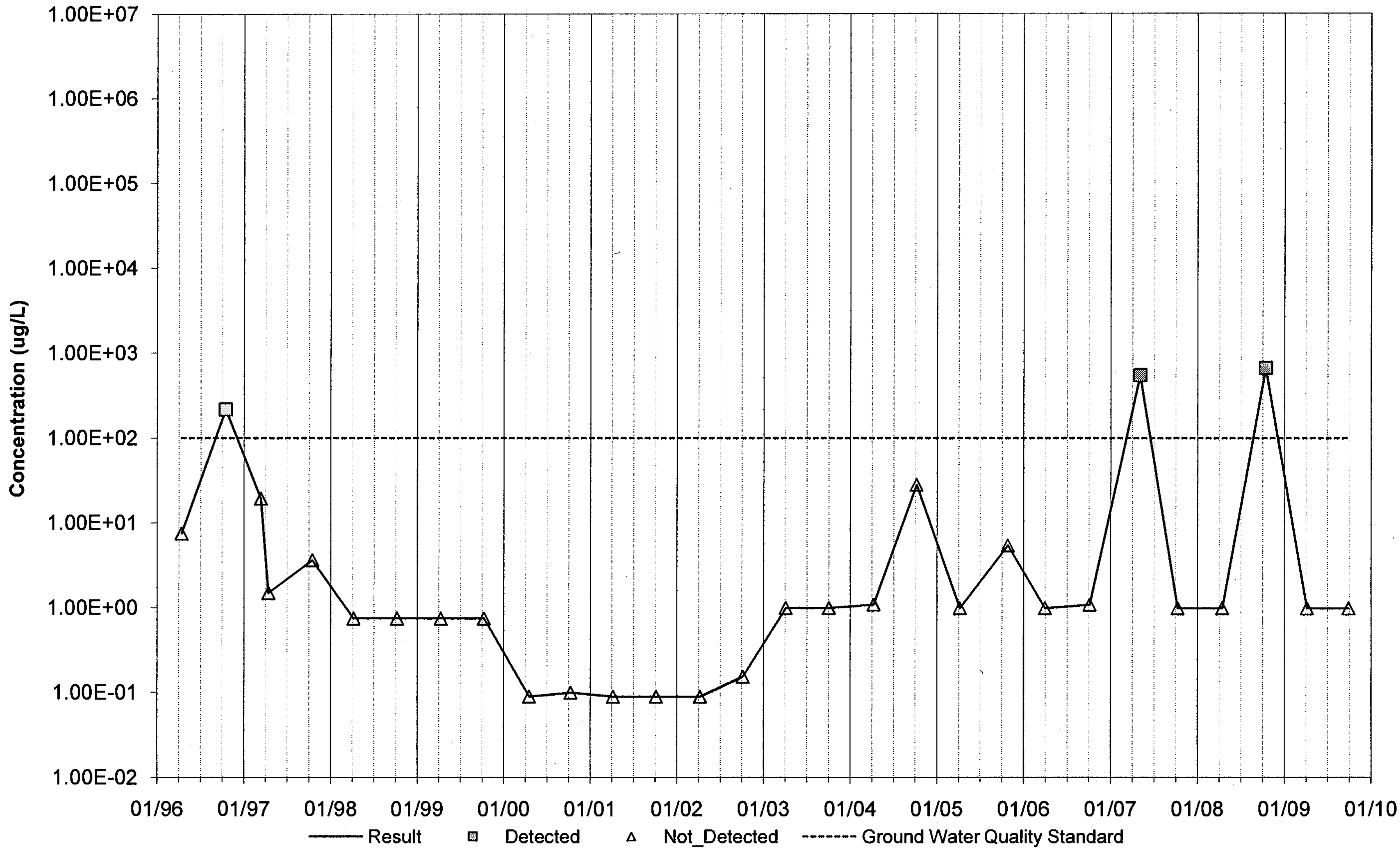
Monitoring Well: YY P2
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



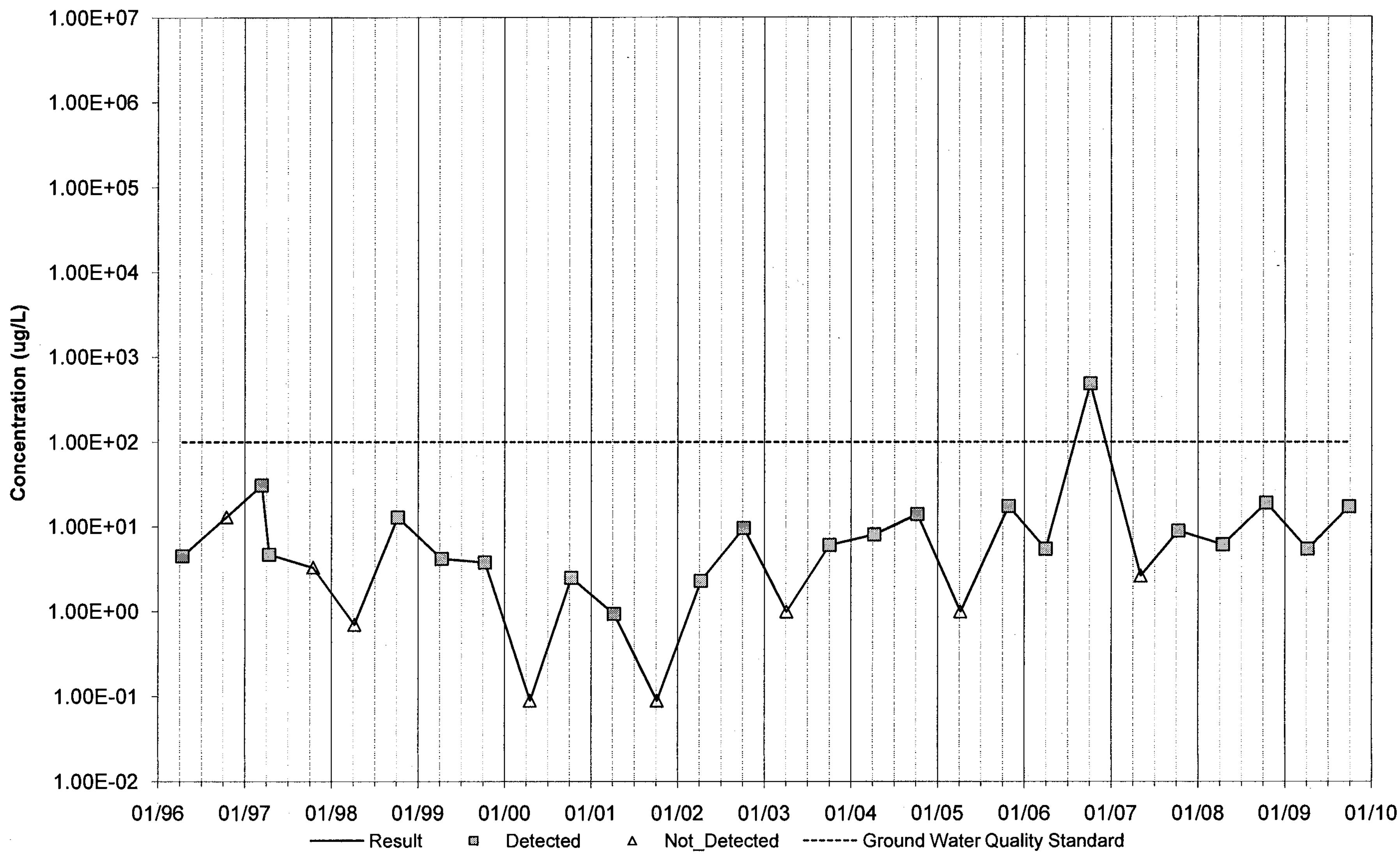
Monitoring Well: YY P3
127-18-4 (Tetrachloroethene)
Log Scale Concentrations



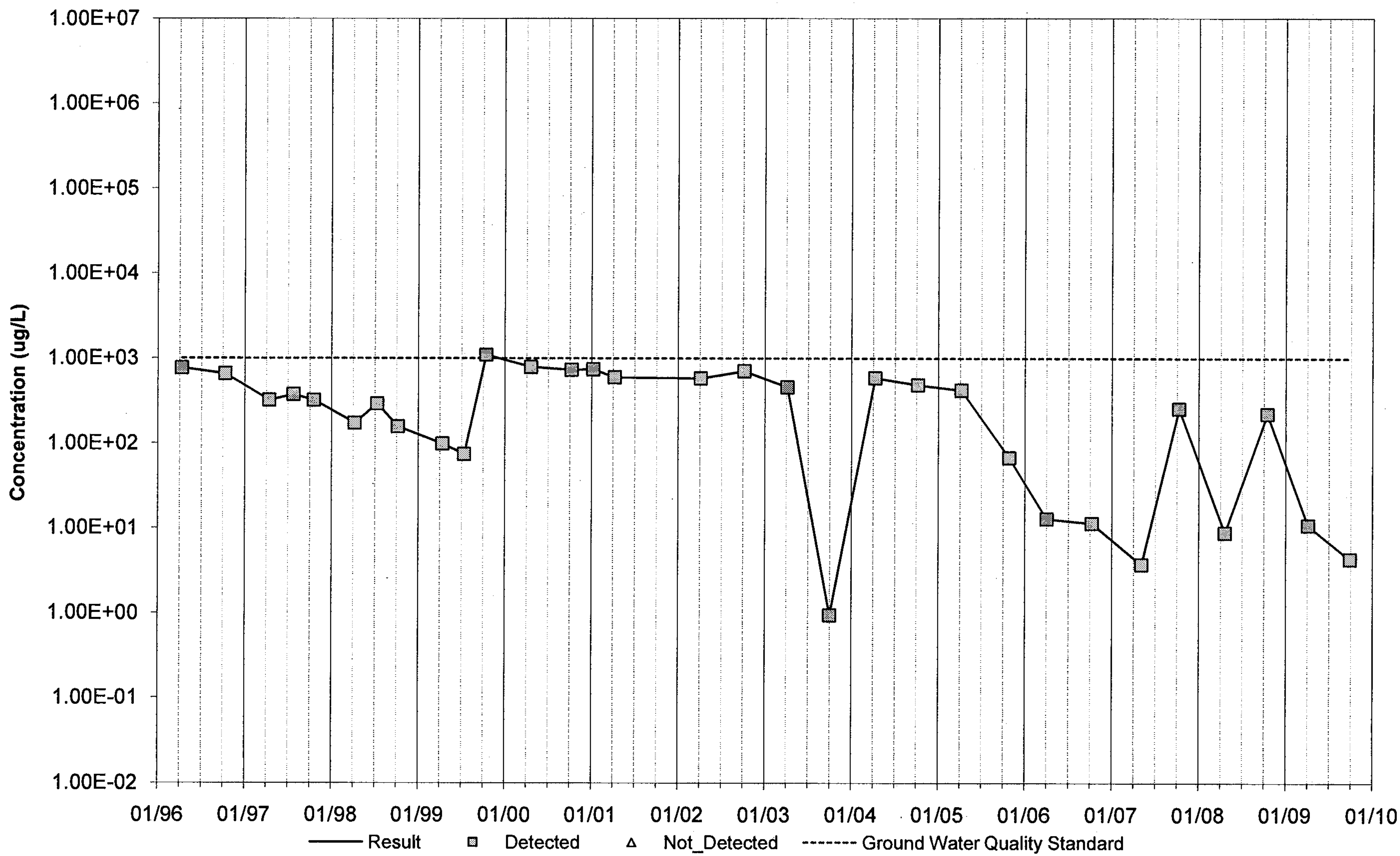
Monitoring Well: 19R
131-11-3 (Dimethyl Phthalate)
Log Scale Concentrations



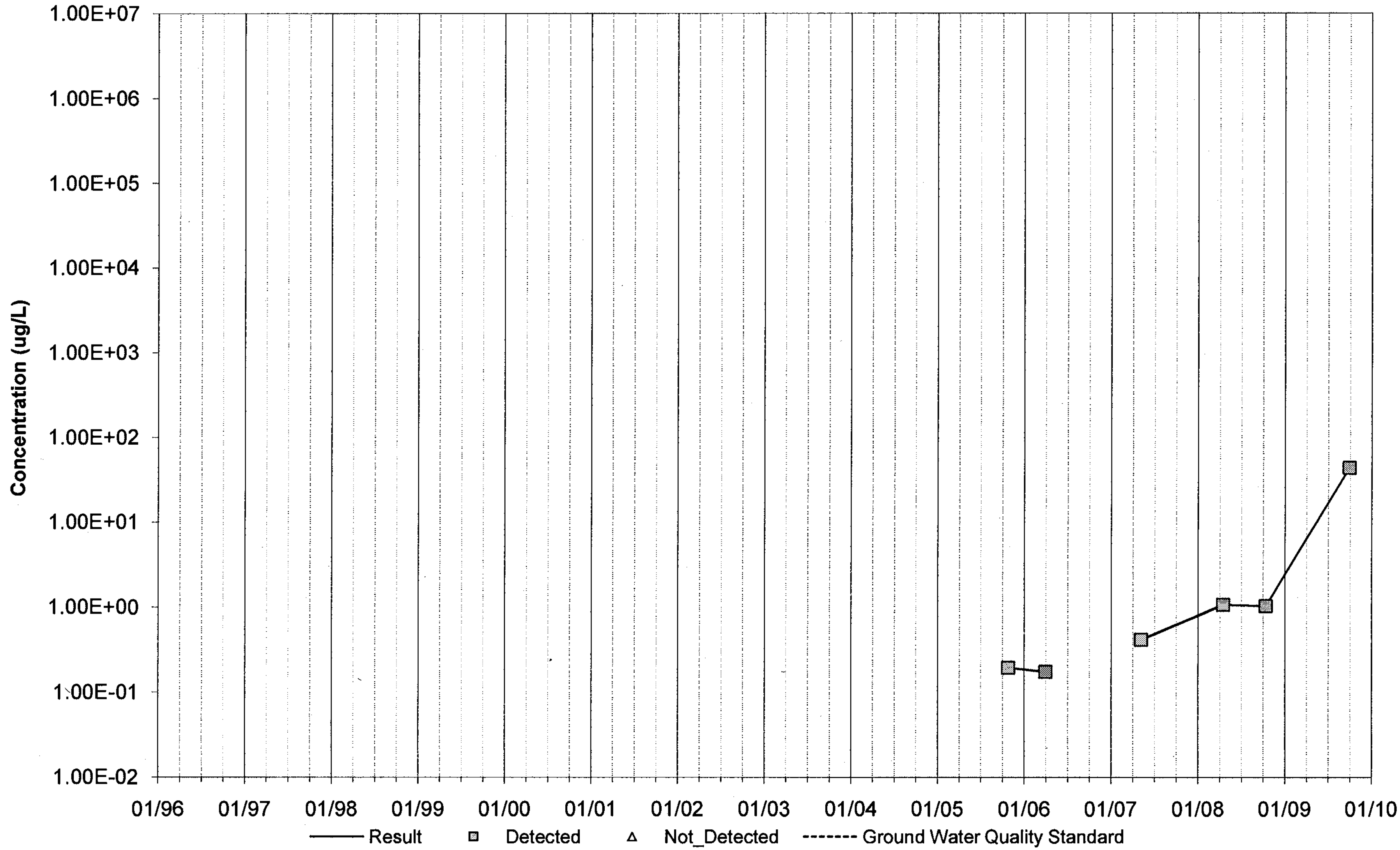
Monitoring Well: 19R
132-64-9 (Dibenzofuran)
Log Scale Concentrations

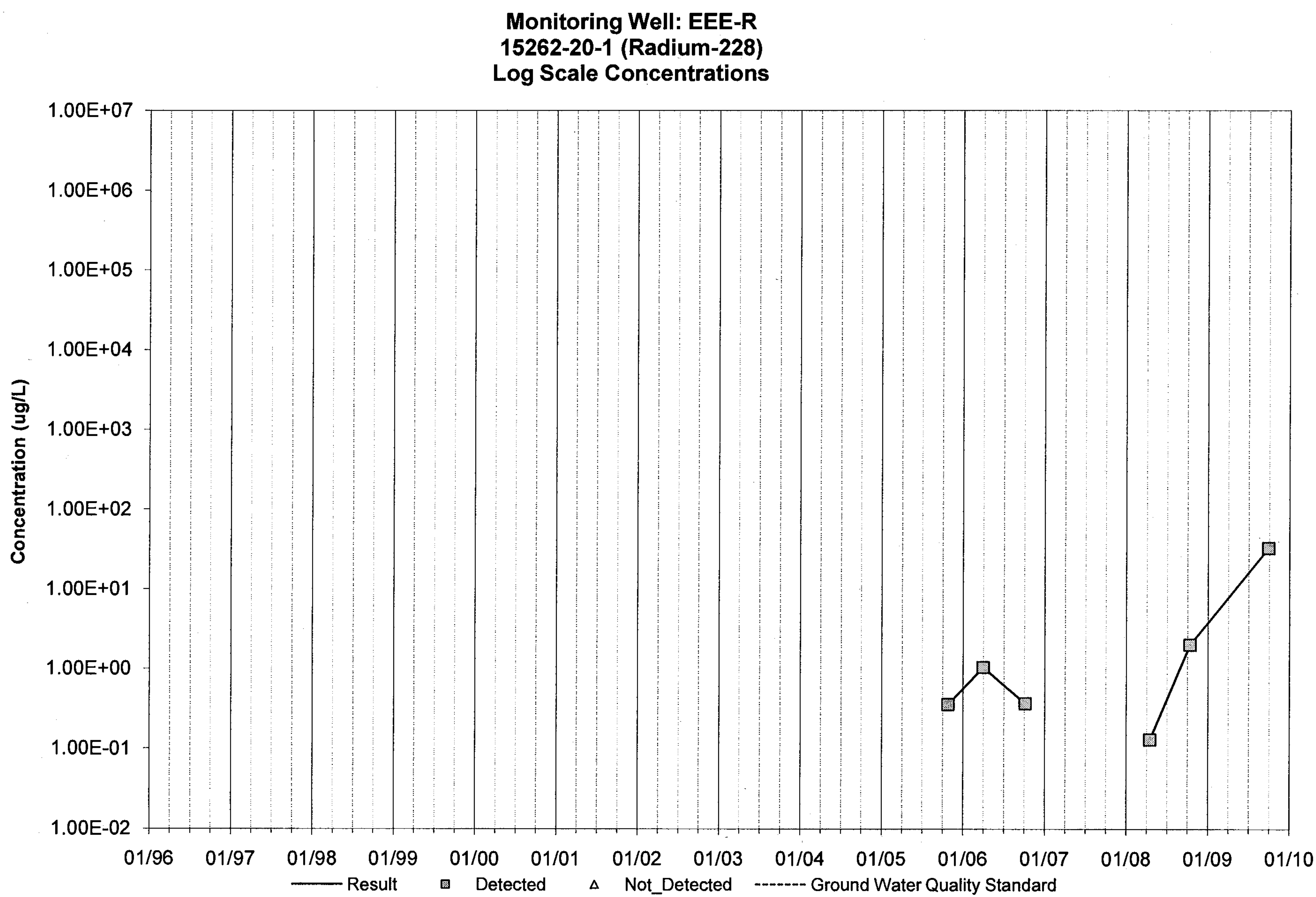


Monitoring Well: 38R
1330-20-7 (Xylenes (Total))
Log Scale Concentrations



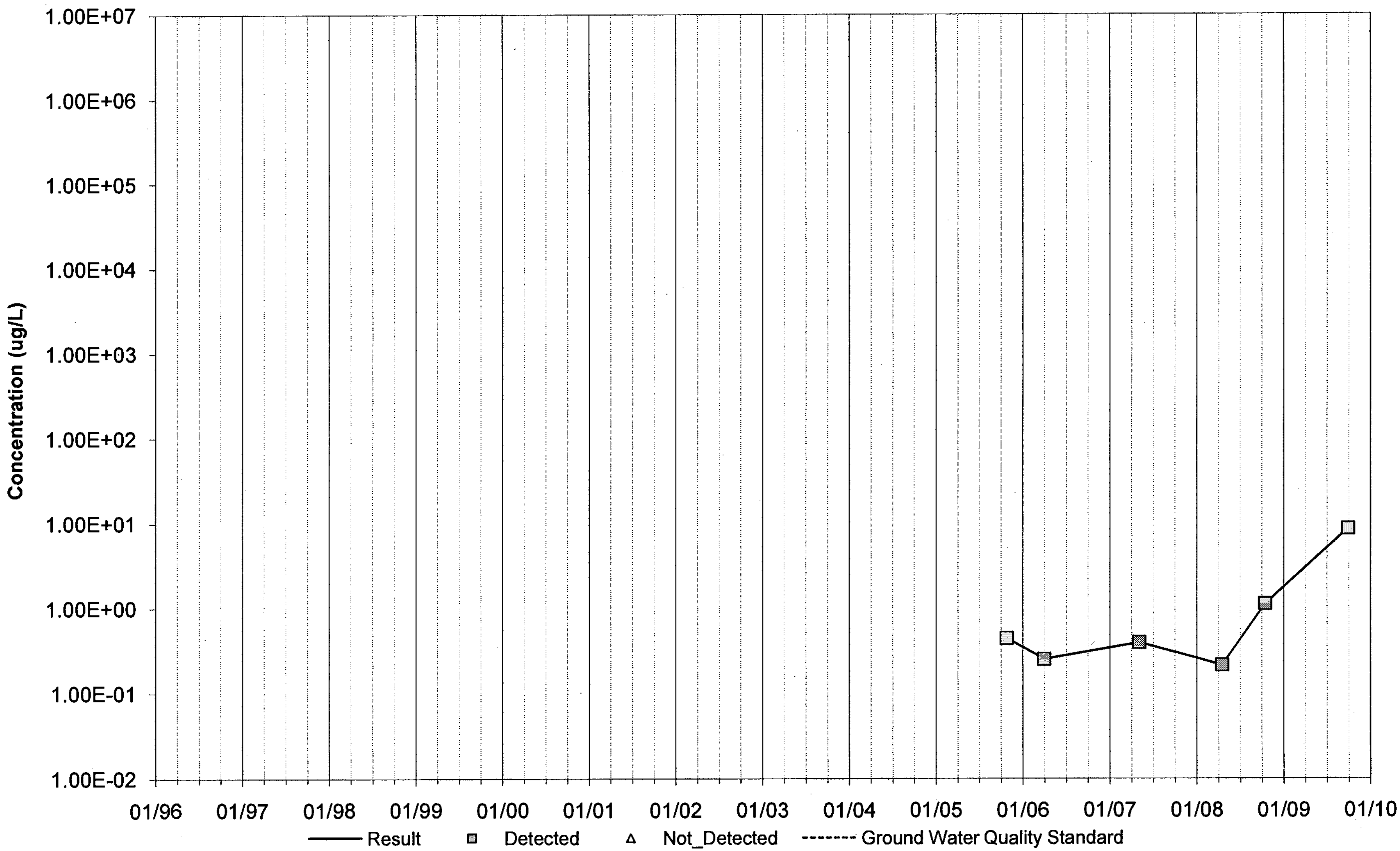
Monitoring Well: CCC-R
15262-20-1 (Radium-228)
Log Scale Concentrations



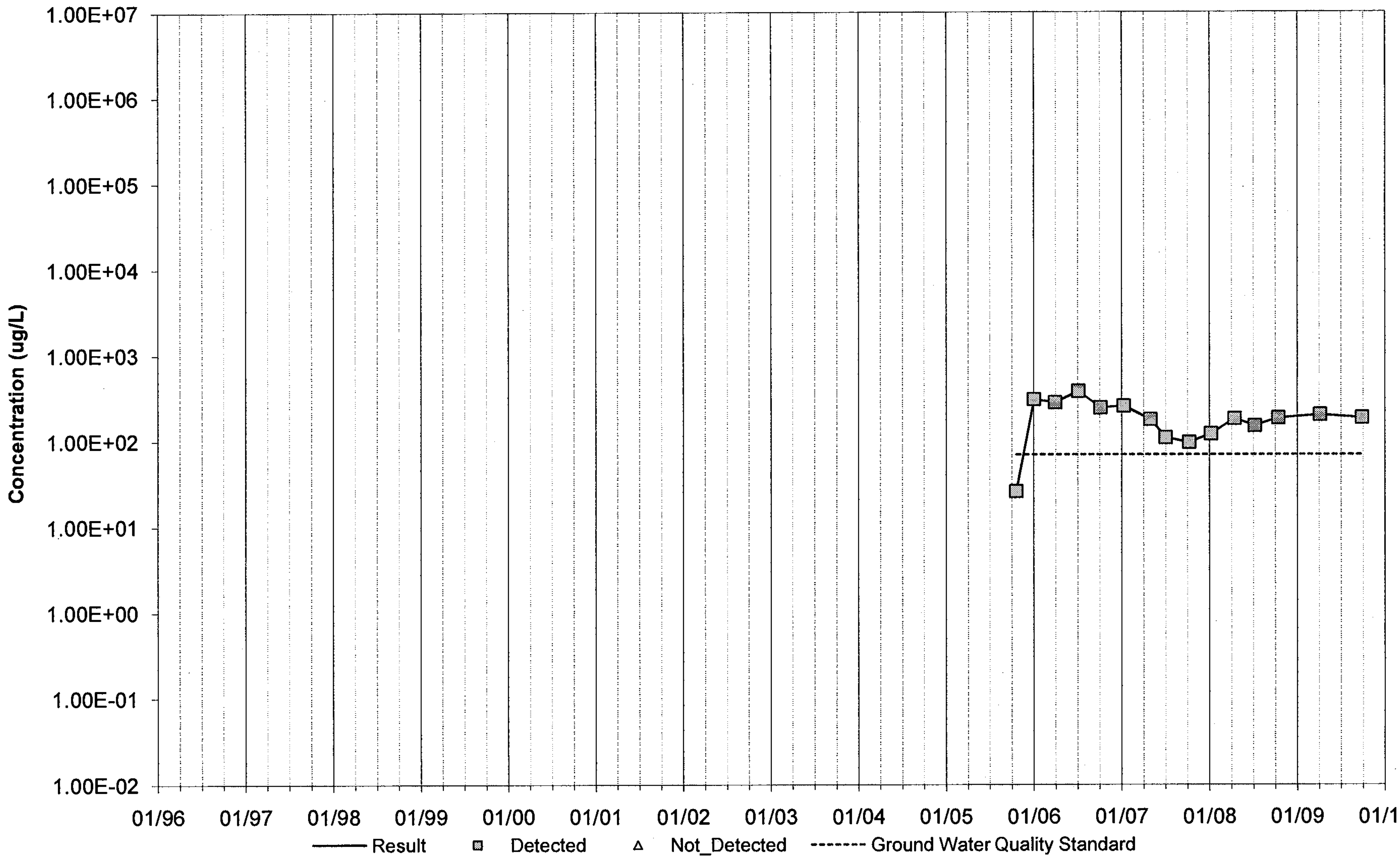


Monitoring Well: EEE-R
15262-20-1 (Radium-228)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

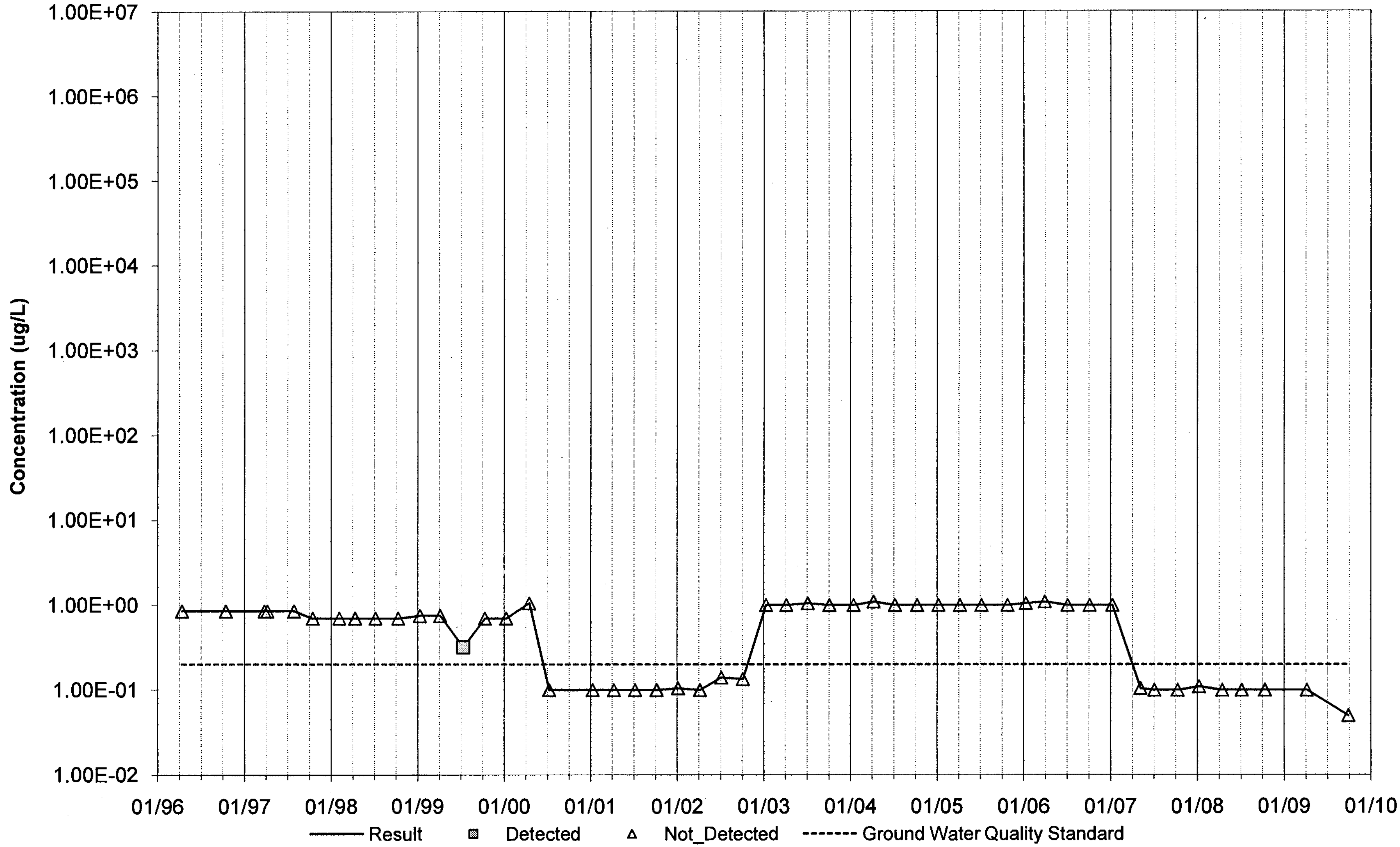
Monitoring Well: KKK
15262-20-1 (Radium-228)
Log Scale Concentrations



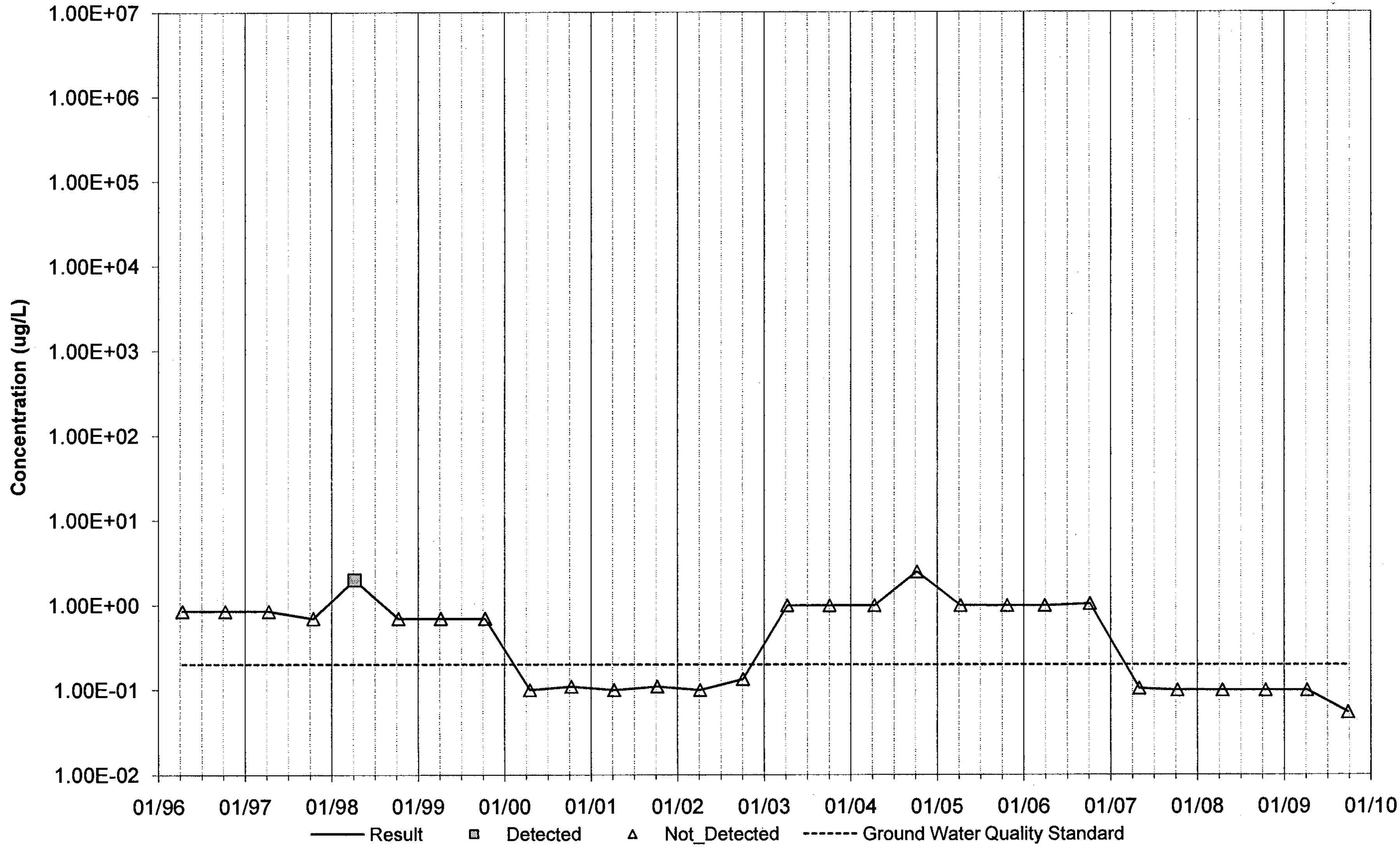
Monitoring Well: TT P1
156-59-2 (cis-1,2-Dichloroethene)
Log Scale Concentrations



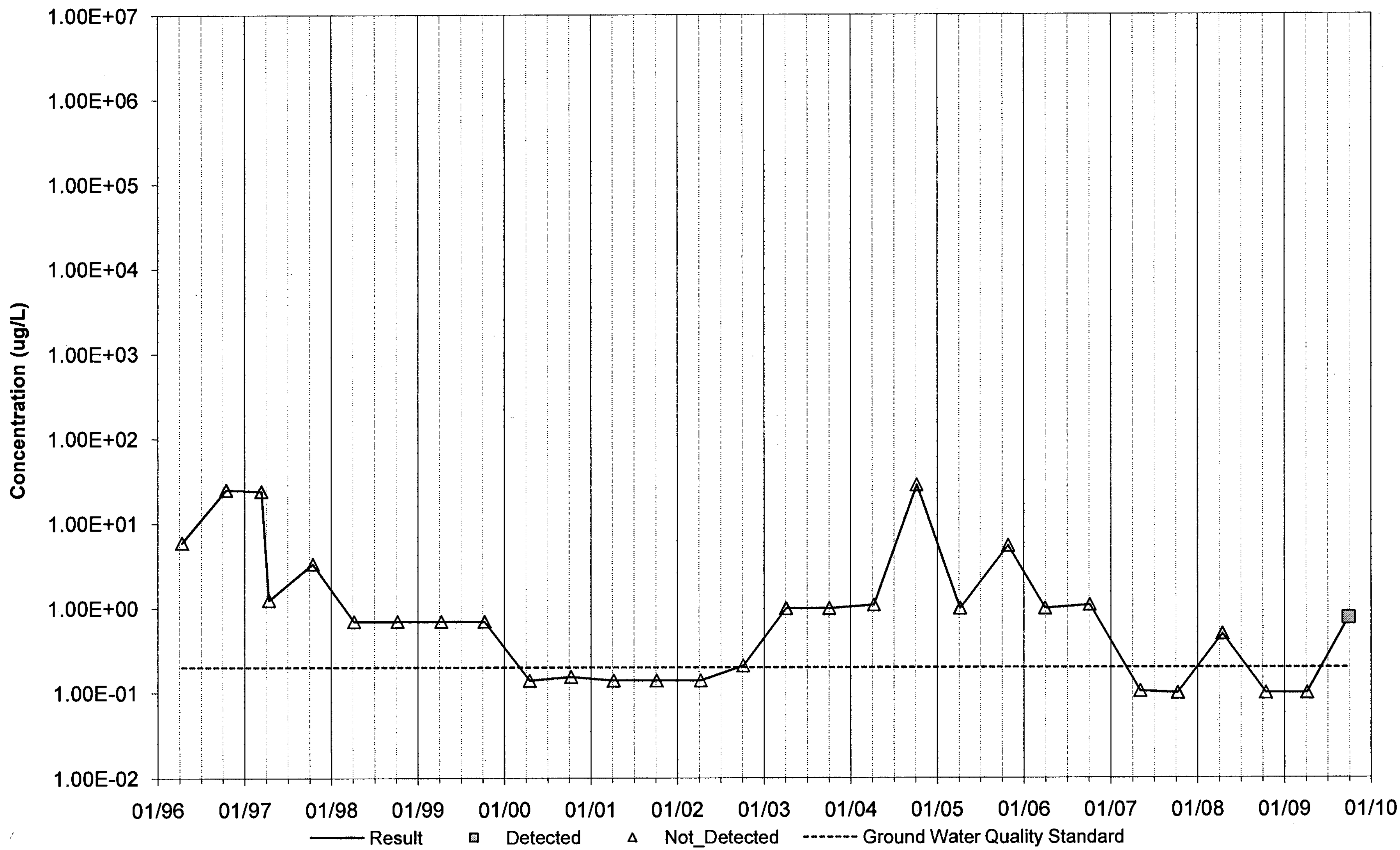
Monitoring Well: EEE-R
193-39-5 (Indeno(1,2,3-Cd)Pyrene)
Log Scale Concentrations



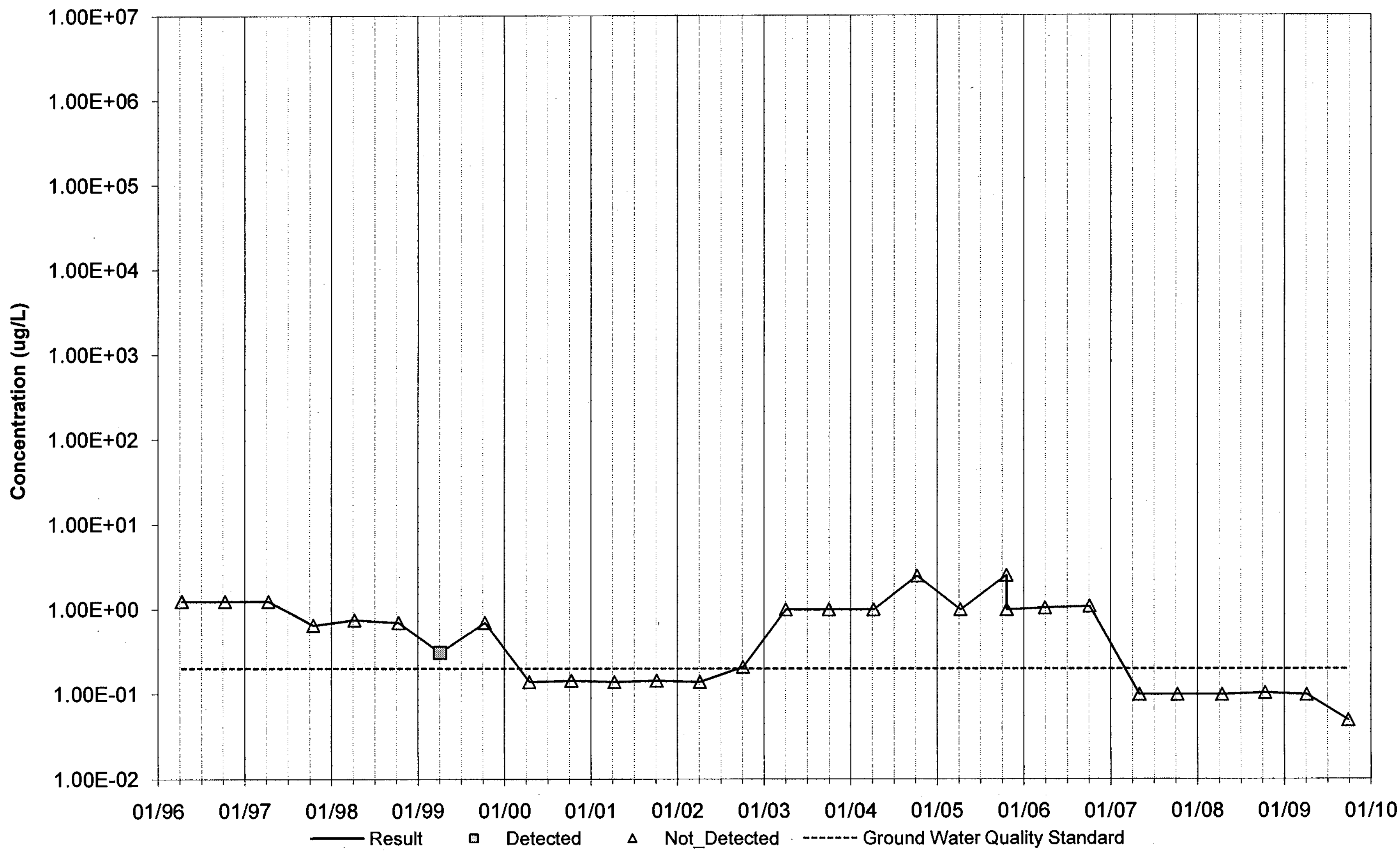
Monitoring Well: RCRA-D13
193-39-5 (Indeno(1,2,3-Cd)Pyrene)
Log Scale Concentrations

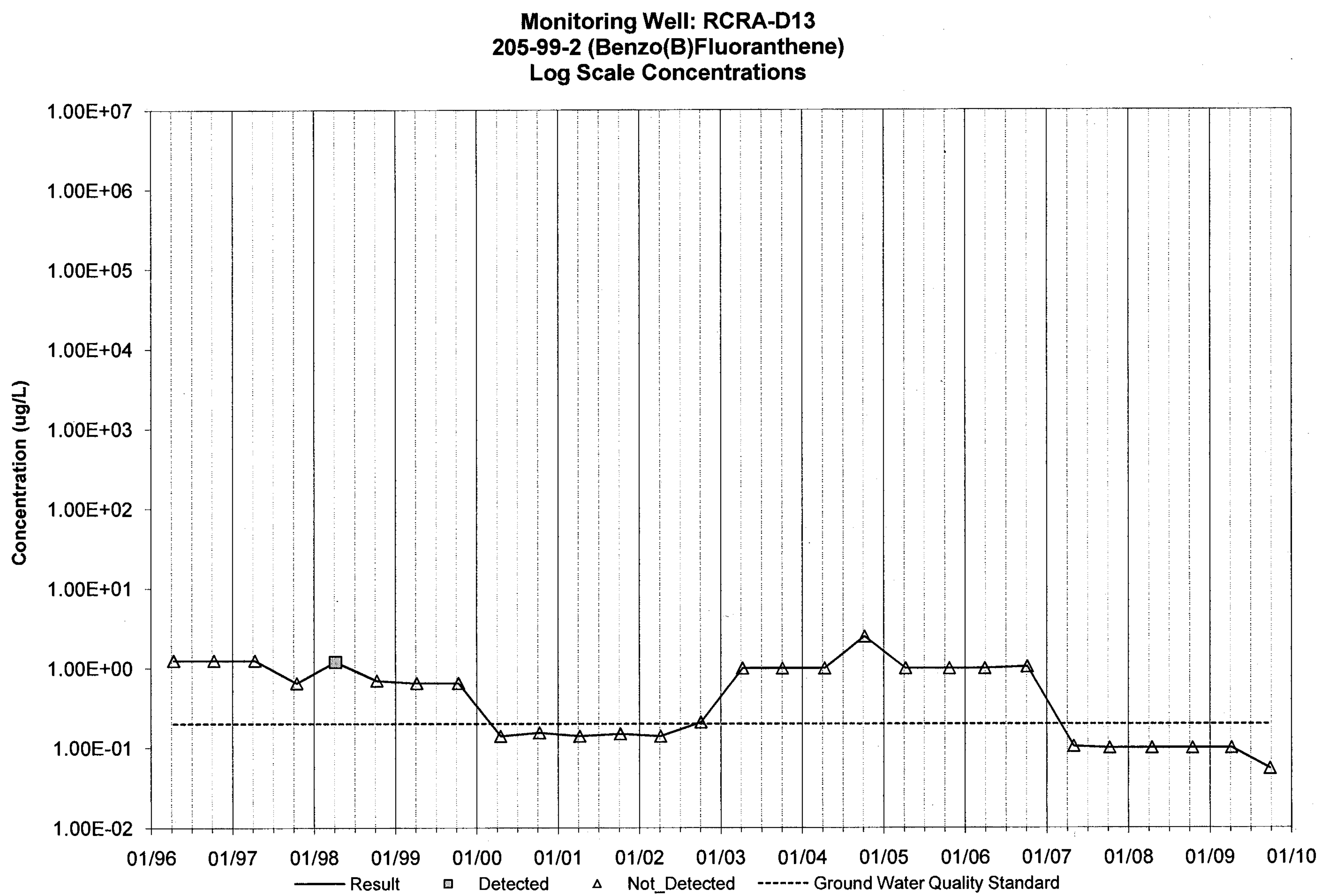


Monitoring Well: 19R
205-99-2 (Benzo(B)Fluoranthene)
Log Scale Concentrations



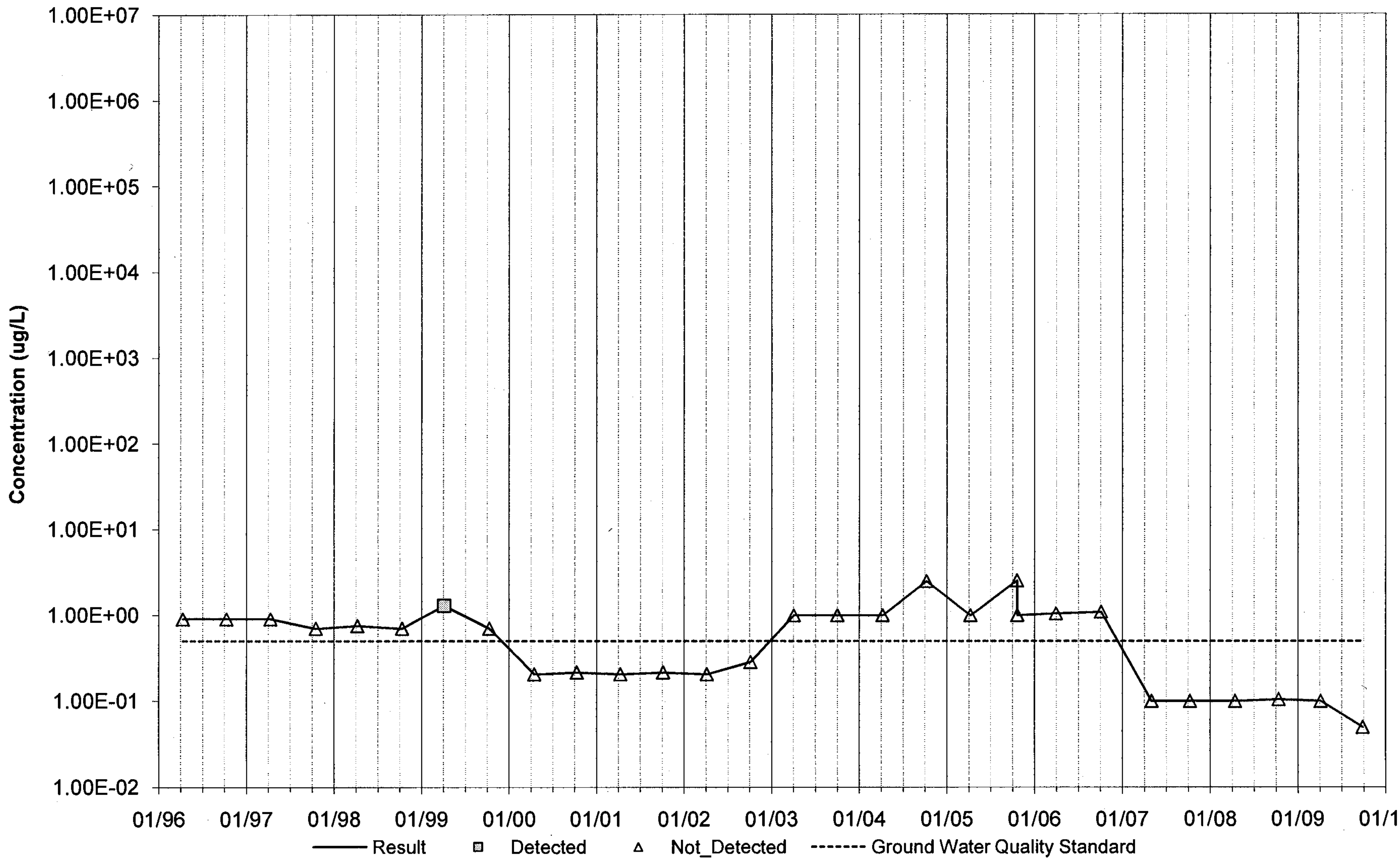
Monitoring Well: RCRA-D10
205-99-2 (Benzo(B)Fluoranthene)
Log Scale Concentrations

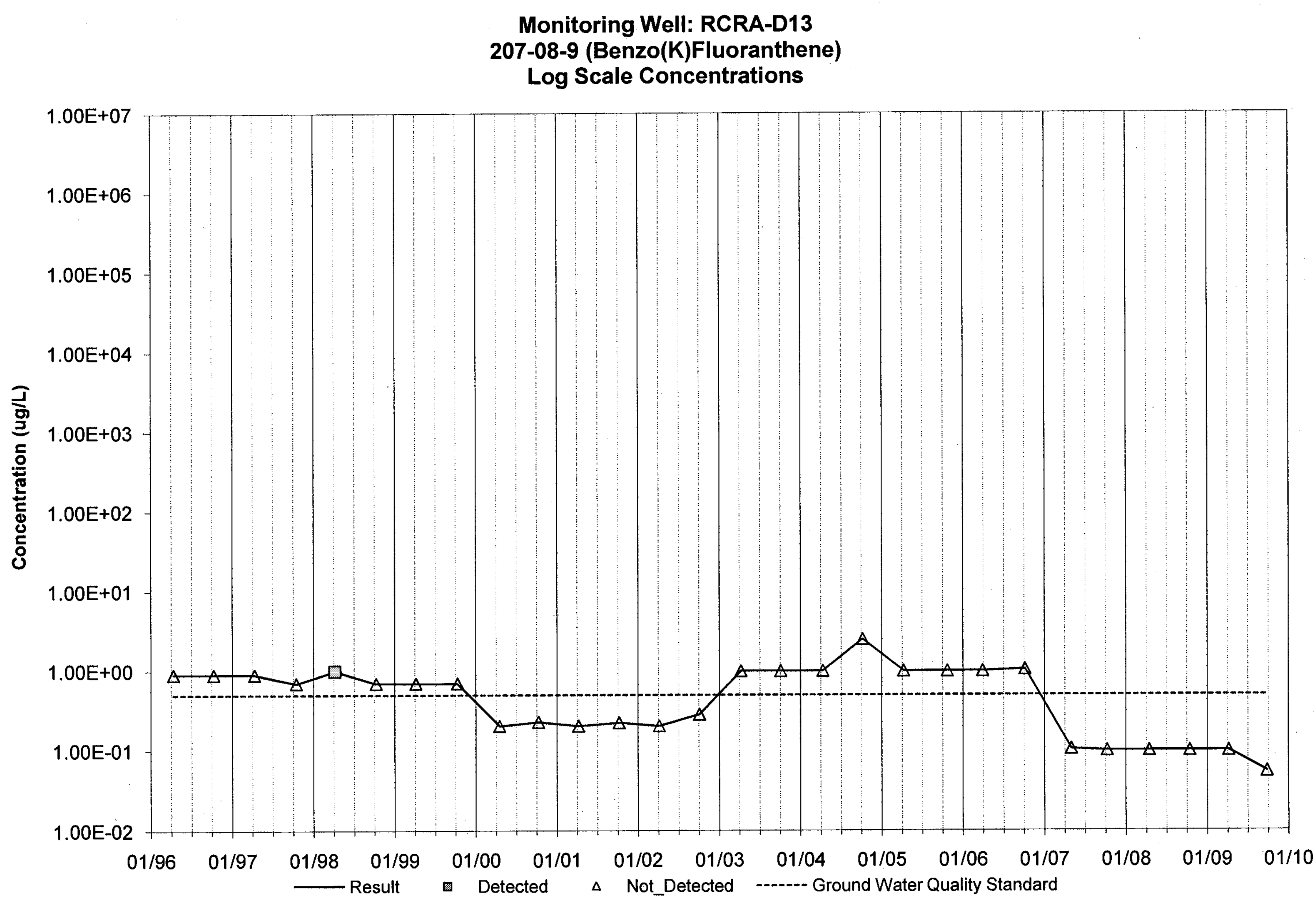




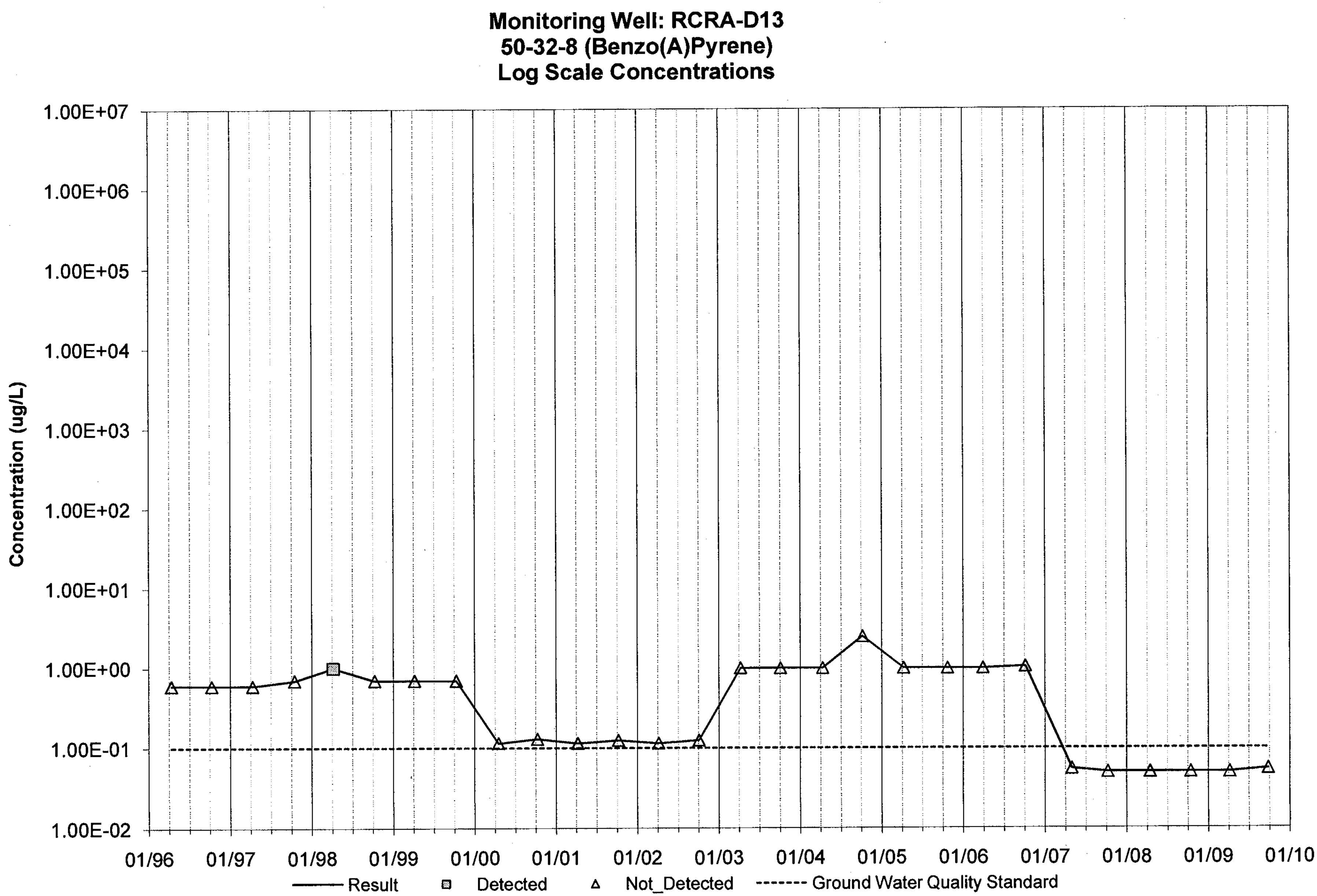
Monitoring Well: RCRA-D13
205-99-2 (Benzo(B)Fluoranthene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D10
207-08-9 (Benzo(K)Fluoranthene)
Log Scale Concentrations



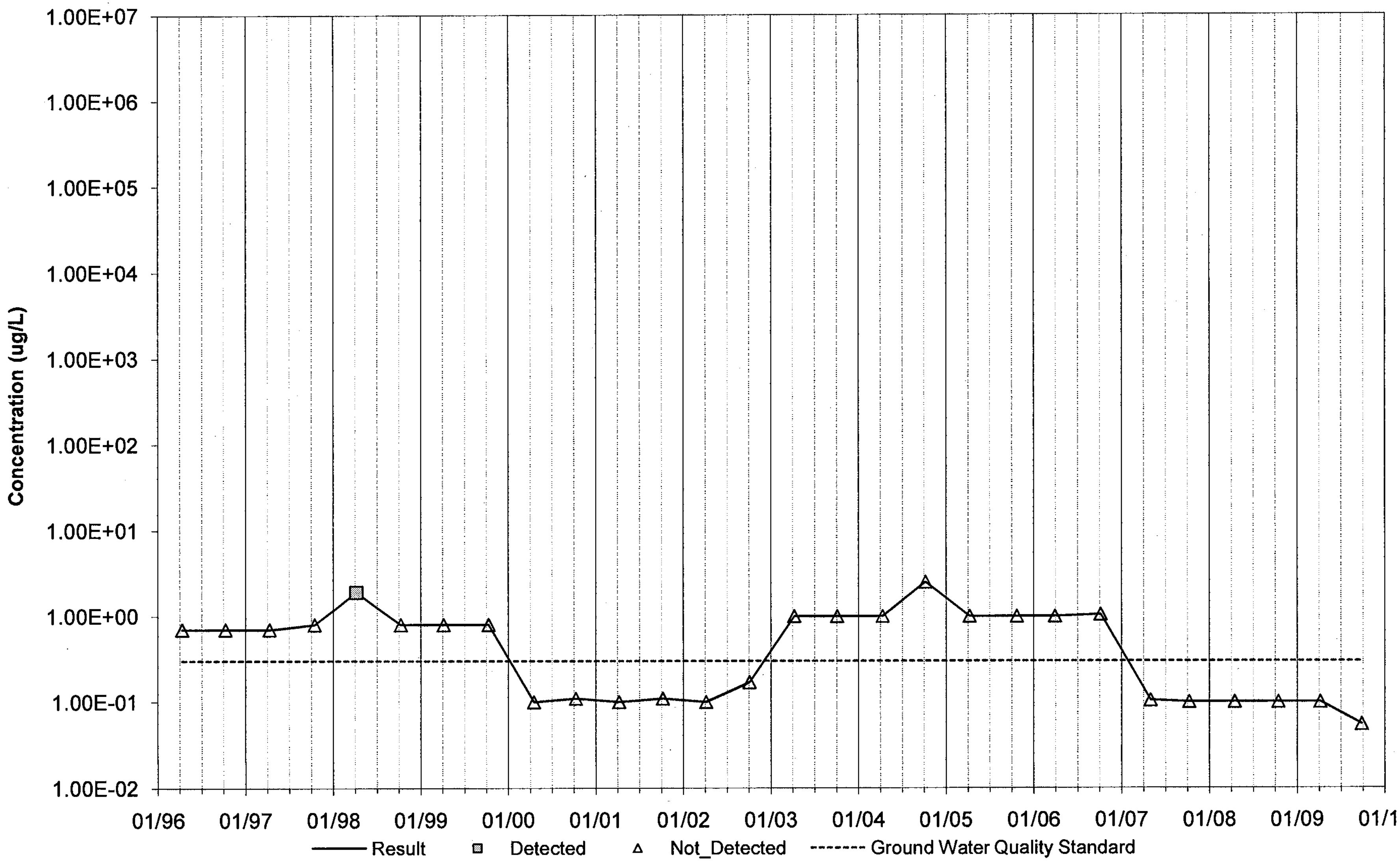


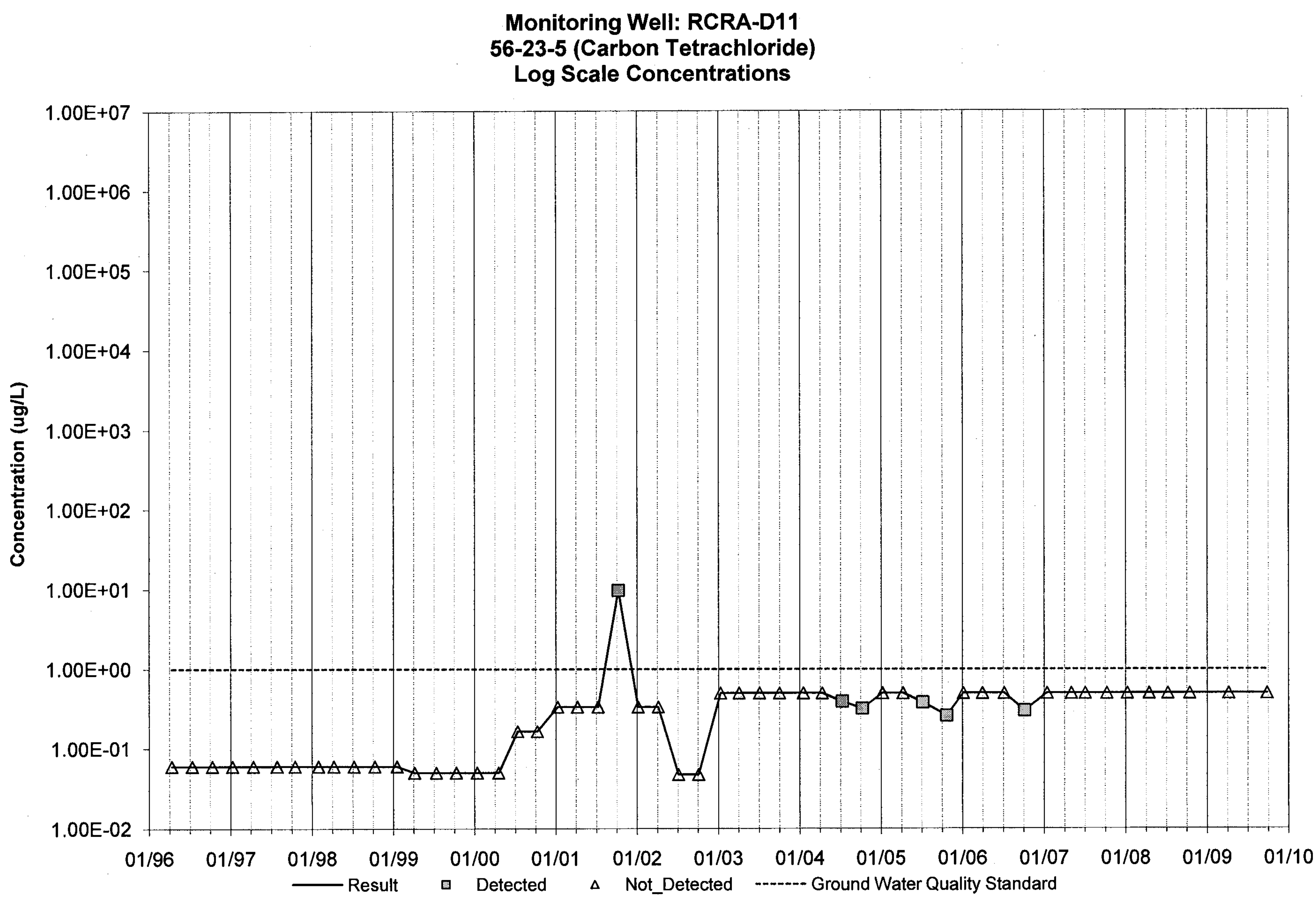
Monitoring Well: RCRA-D13
207-08-9 (Benzo(K)Fluoranthene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



Monitoring Well: RCRA-D13
50-32-8 (Benzo(A)Pyrene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

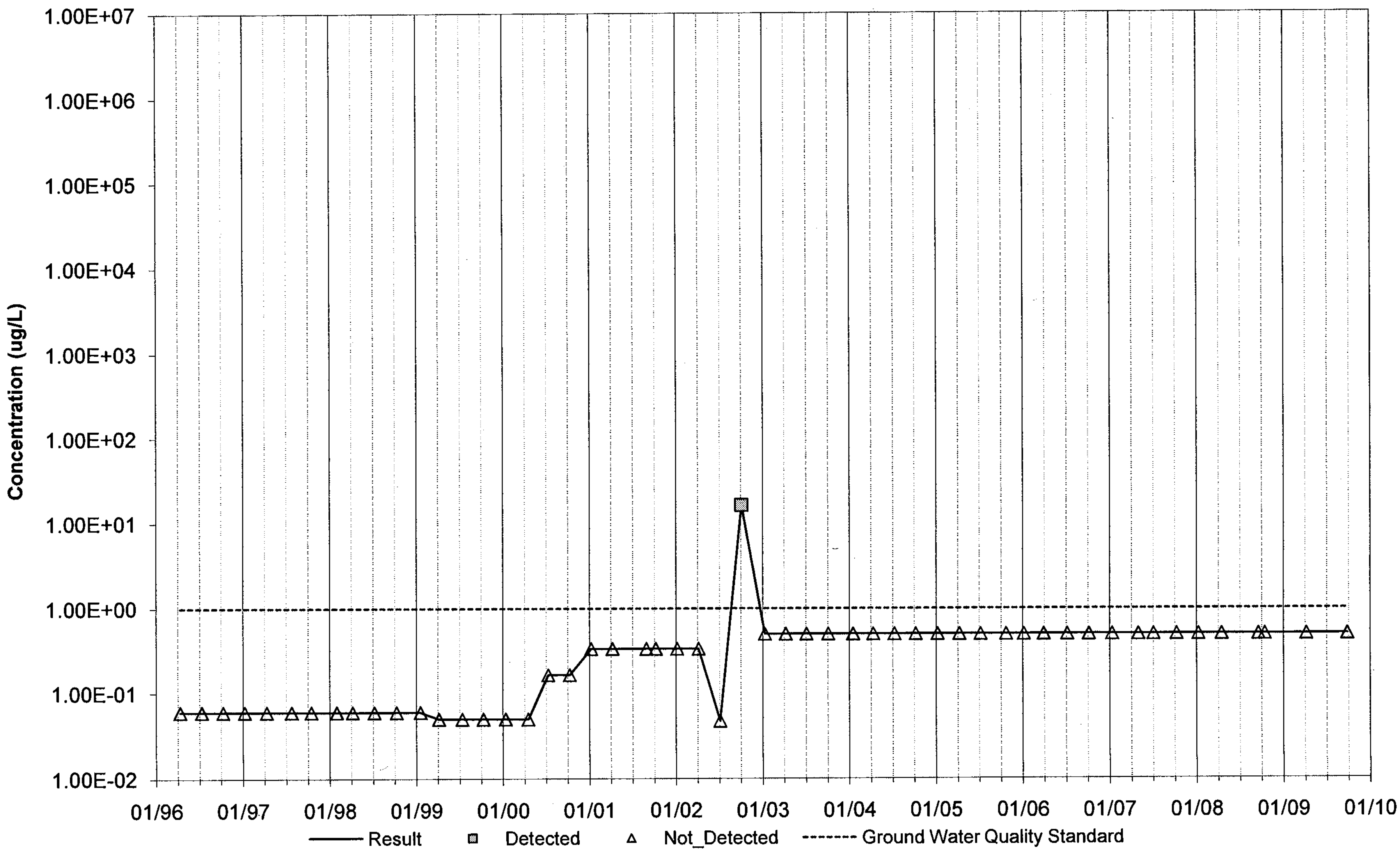
Monitoring Well: RCRA-D13
53-70-3 (Dibenzo(A,H)Anthracene)
Log Scale Concentrations

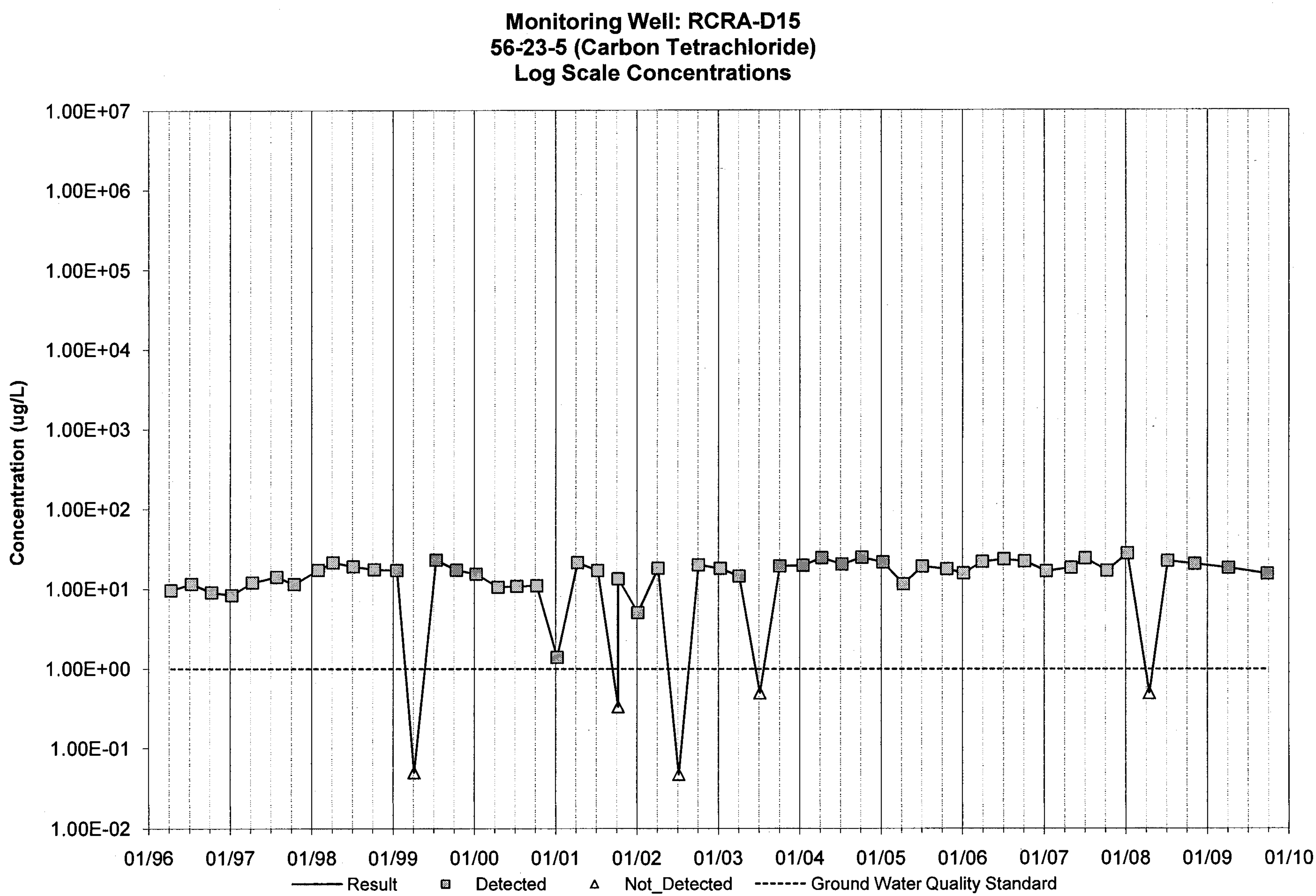




Monitoring Well: RCRA-D11
56-23-5 (Carbon Tetrachloride)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

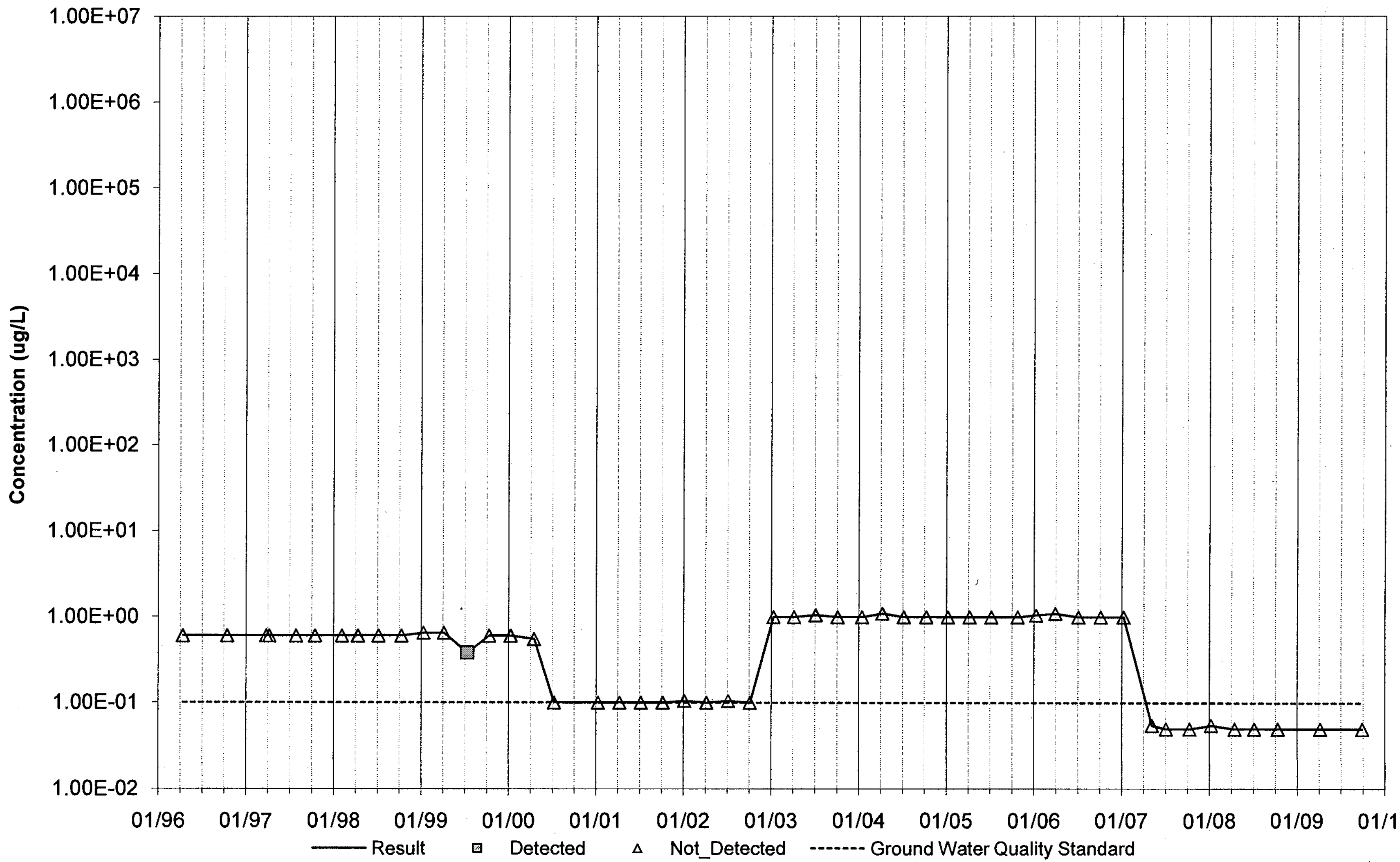
Monitoring Well: RCRA-D13
56-23-5 (Carbon Tetrachloride)
Log Scale Concentrations



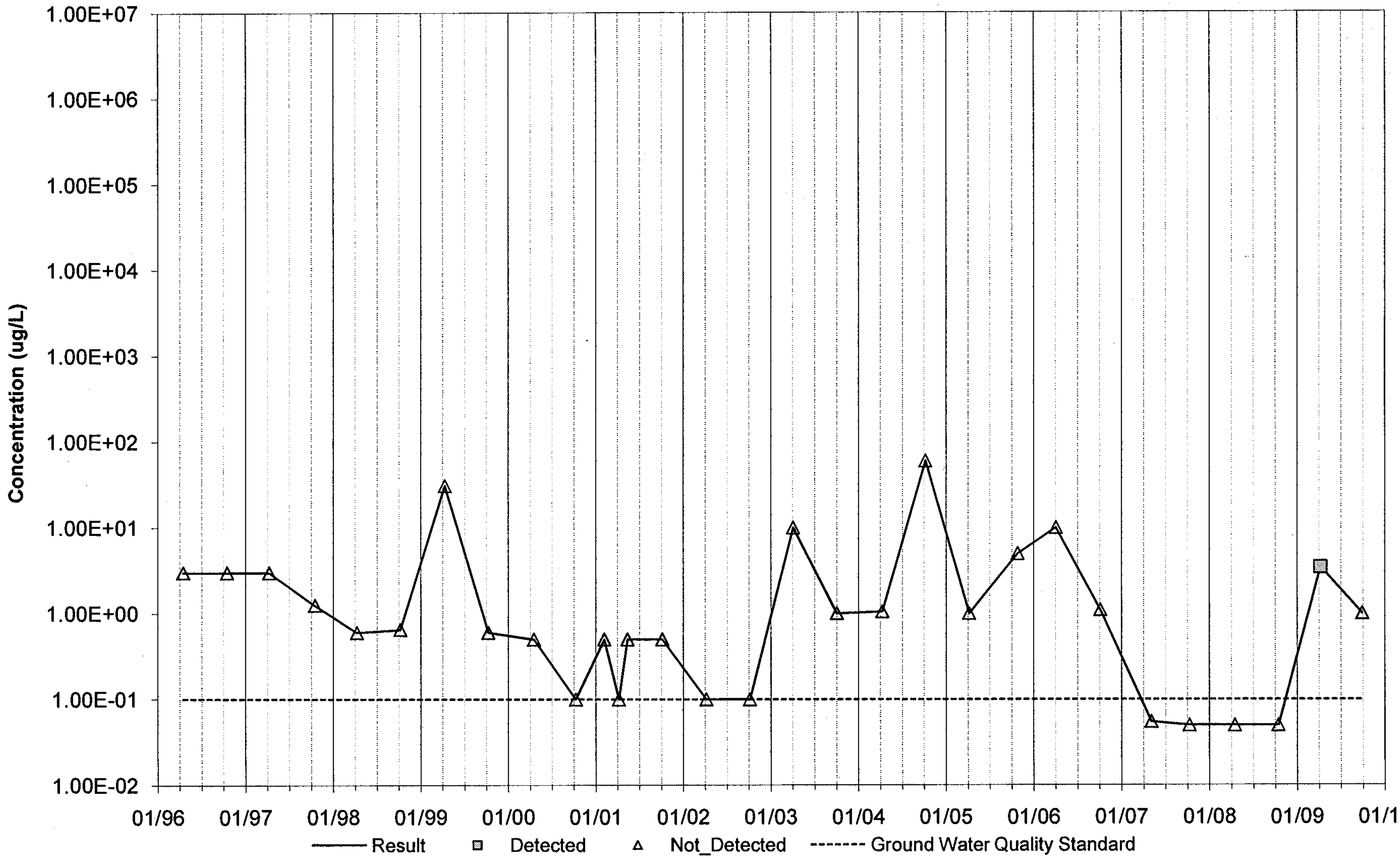


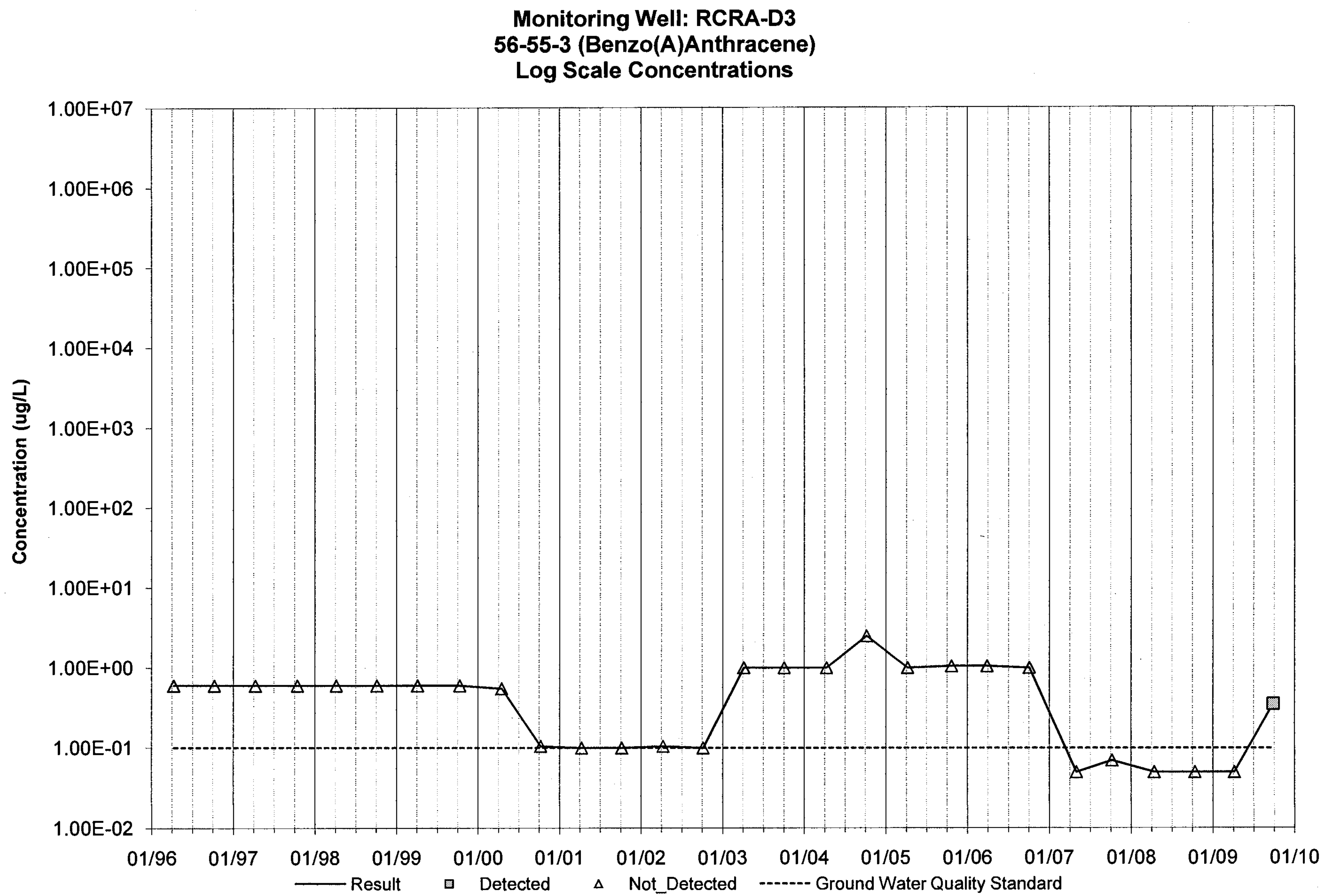
Monitoring Well: RCRA-D15
56-23-5 (Carbon Tetrachloride)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: EEE-R
56-55-3 (Benzo(A)Anthracene)
Log Scale Concentrations



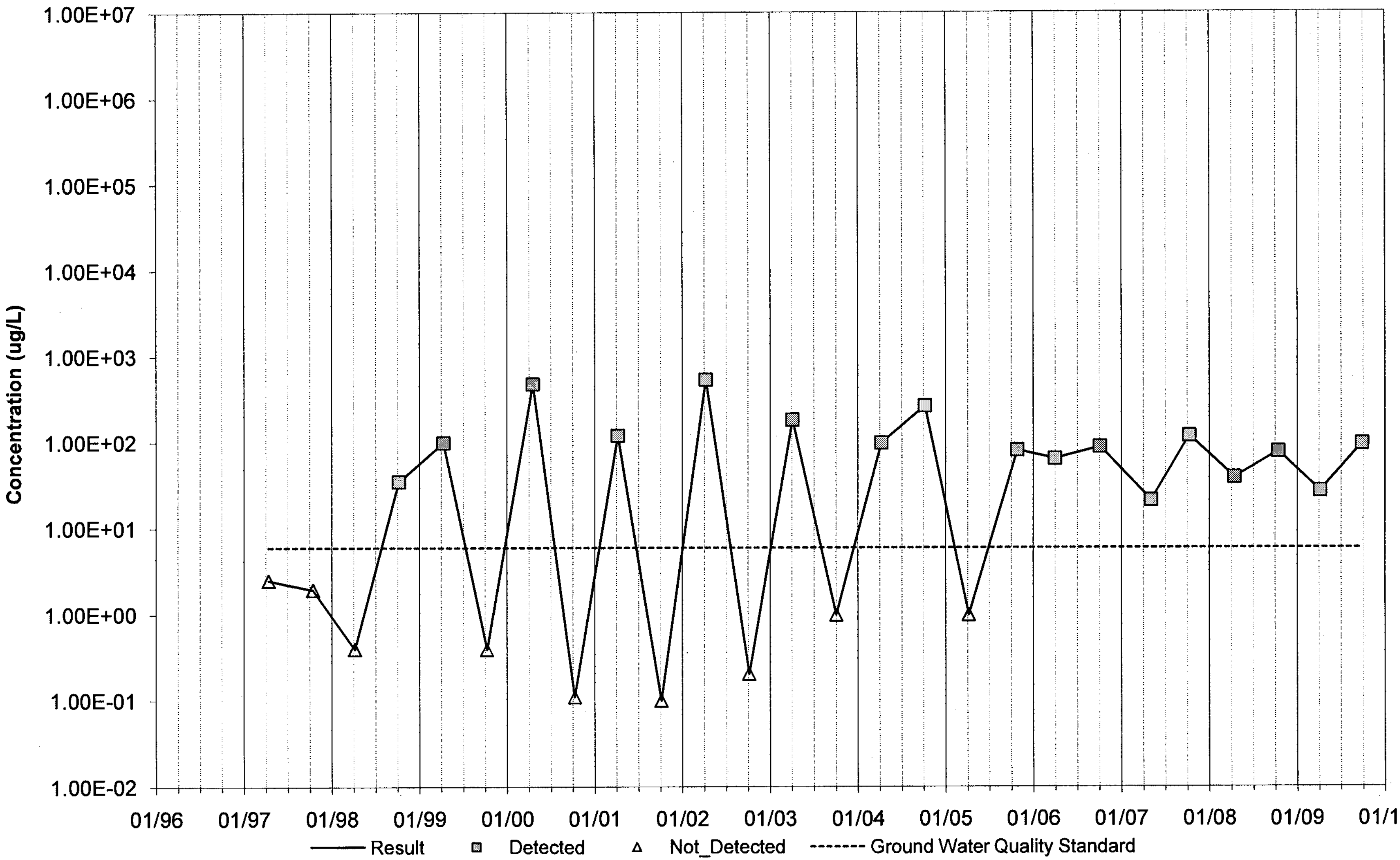
Monitoring Well: MW-2
56-55-3 (Benzo(A)Anthracene)
Log Scale Concentrations



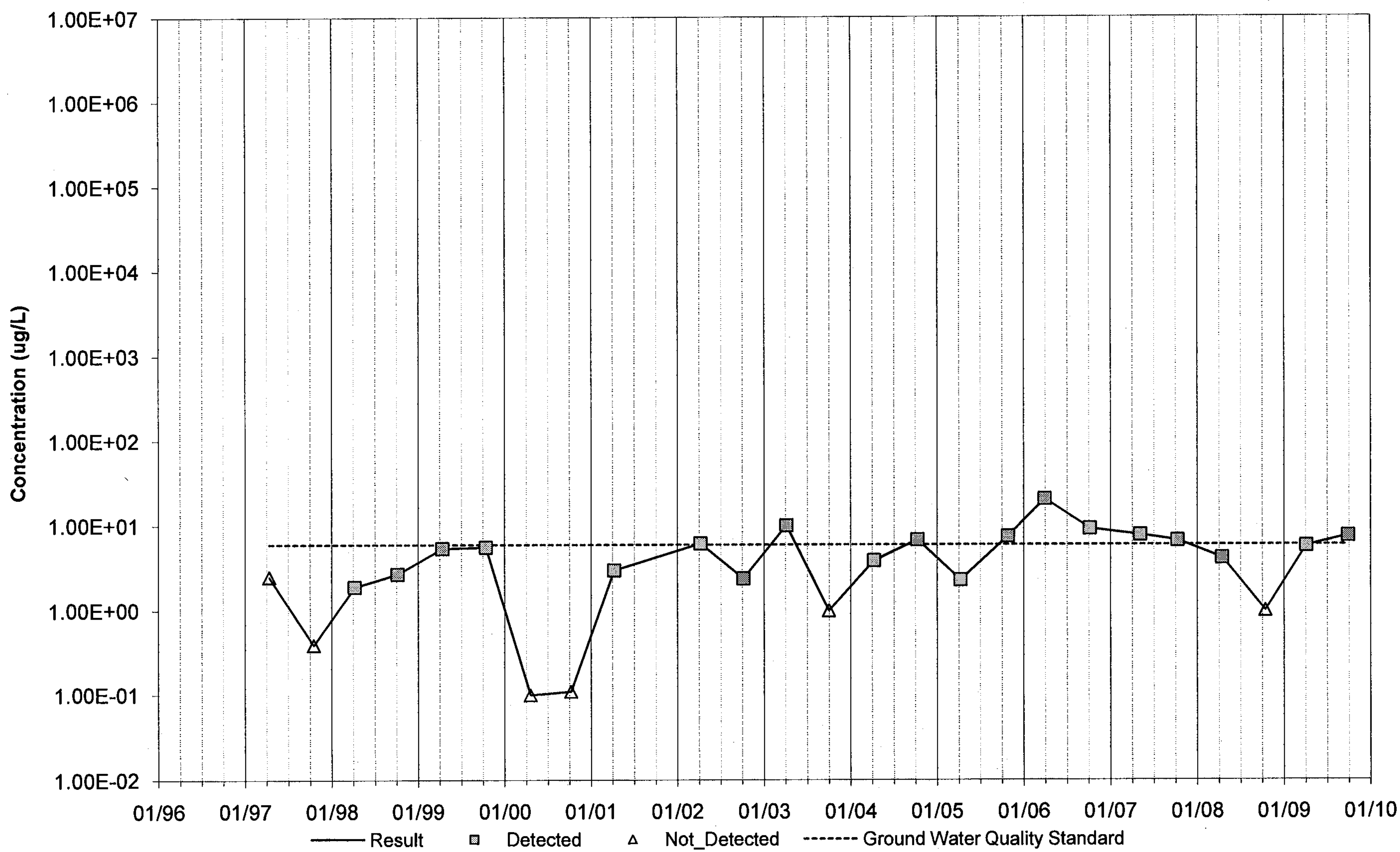


Monitoring Well: RCRA-D3
56-55-3 (Benzo(A)Anthracene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

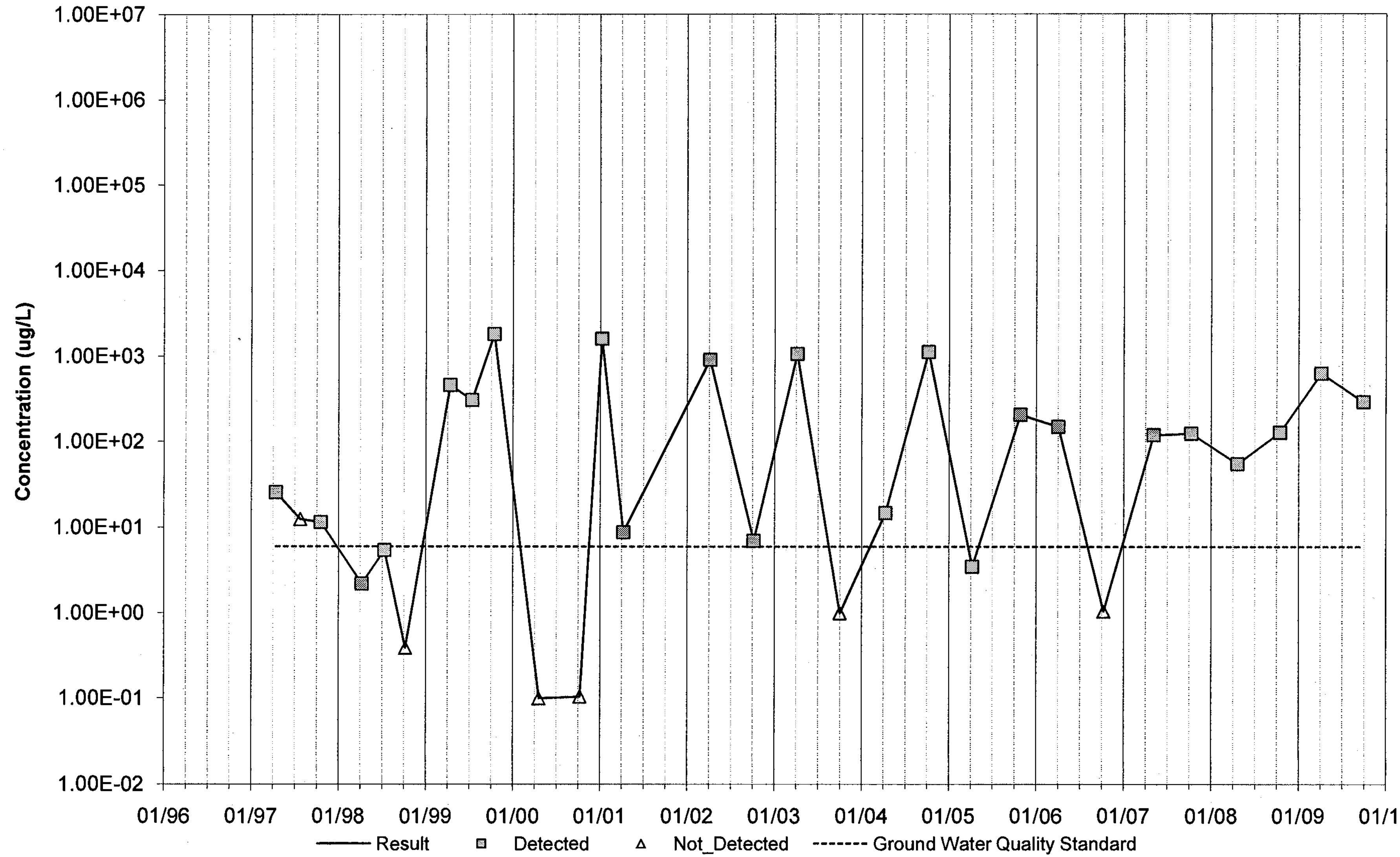
Monitoring Well: 19R
62-53-3 (Aniline)
Log Scale Concentrations



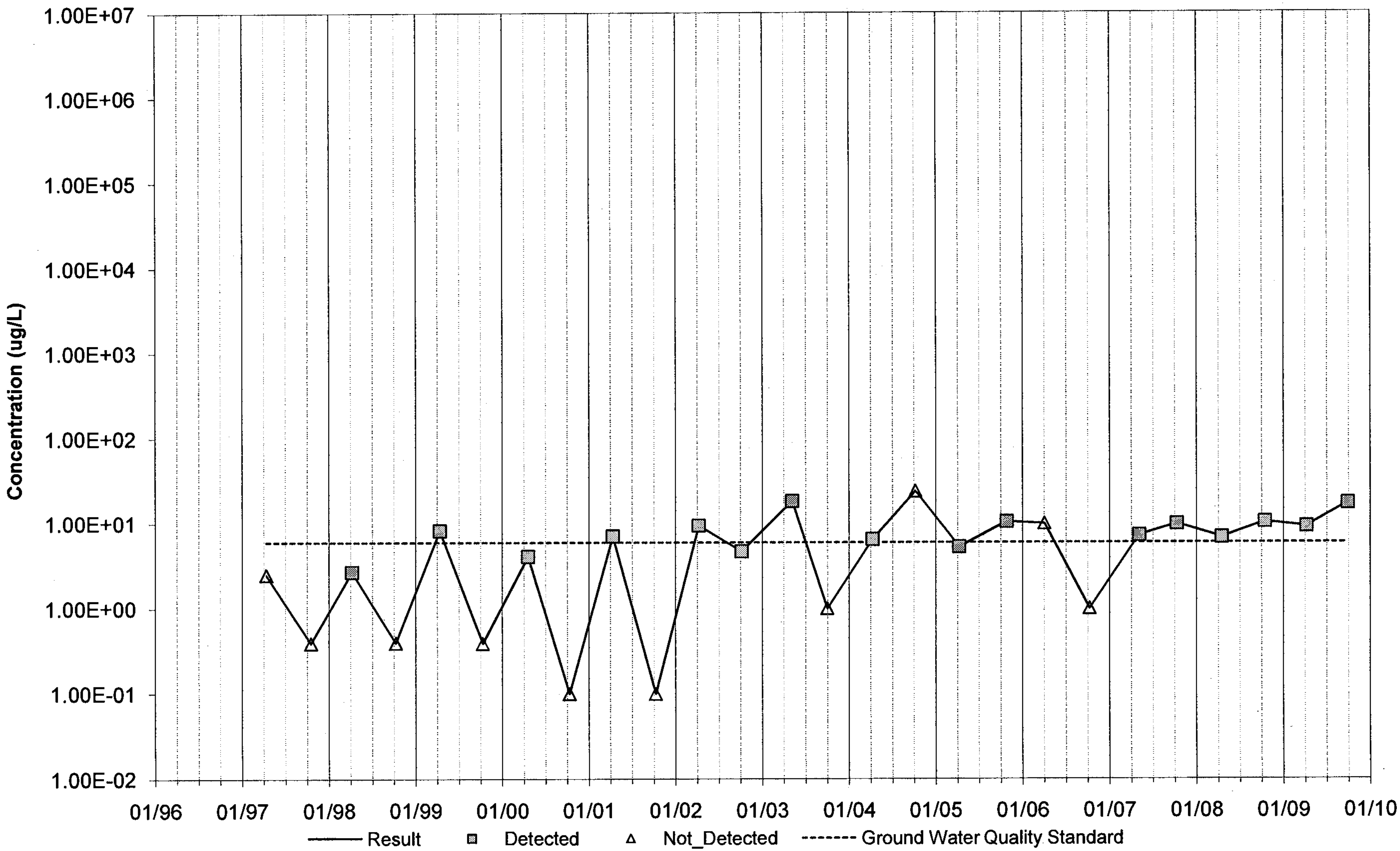
Monitoring Well: 34R
62-53-3 (Aniline)
Log Scale Concentrations



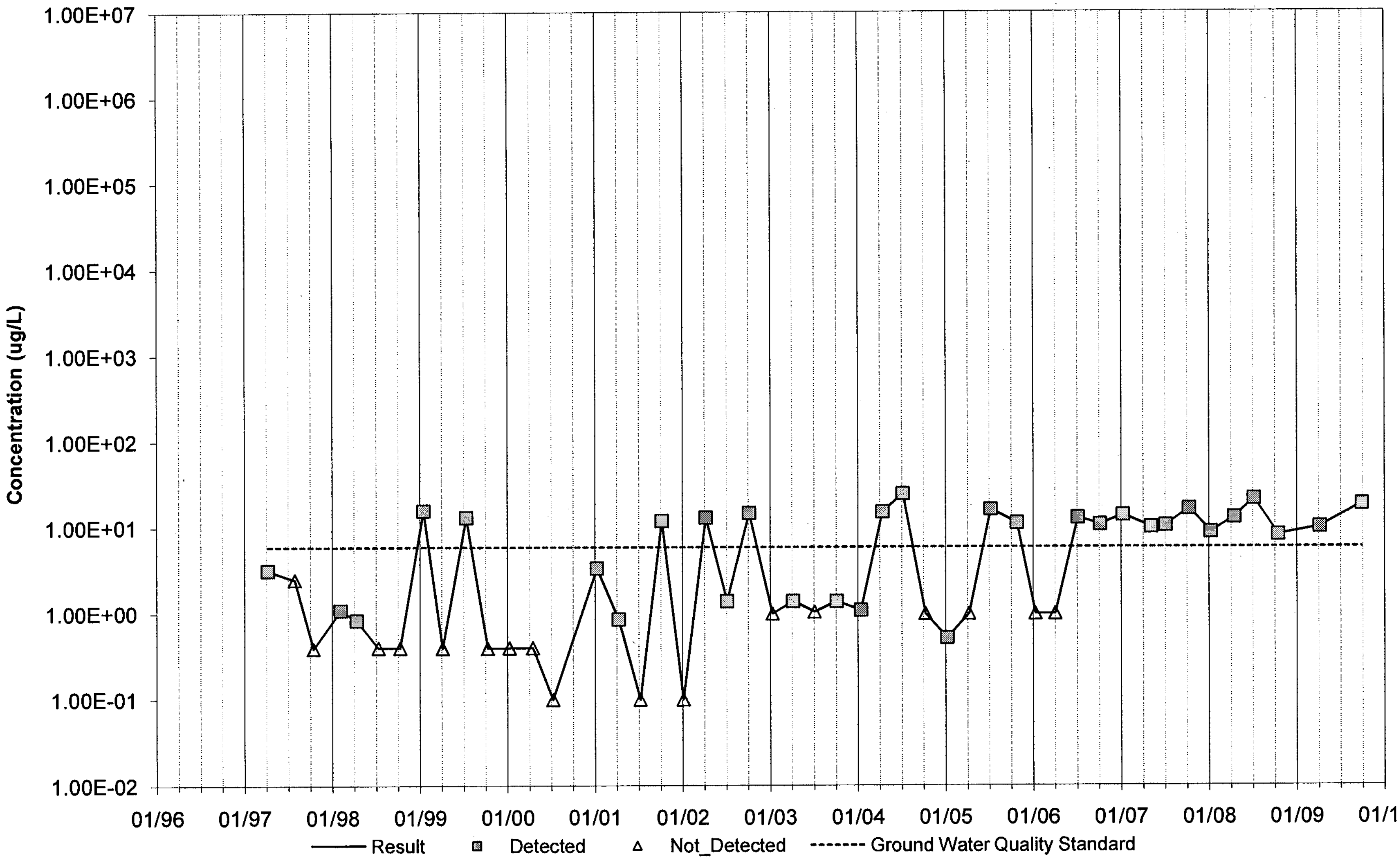
Monitoring Well: 38R
62-53-3 (Aniline)
Log Scale Concentrations



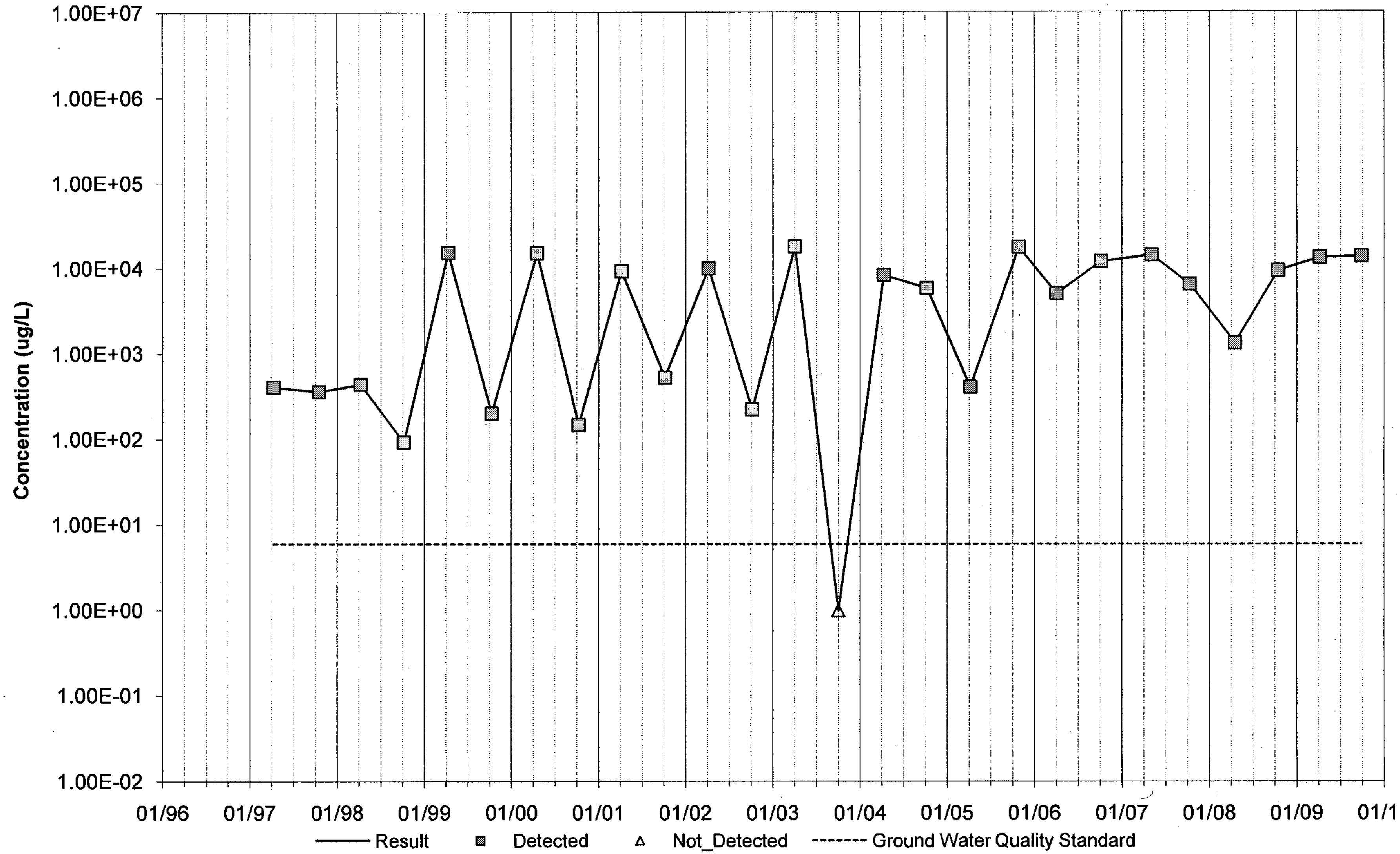
Monitoring Well: 42R
62-53-3 (Aniline)
Log Scale Concentrations



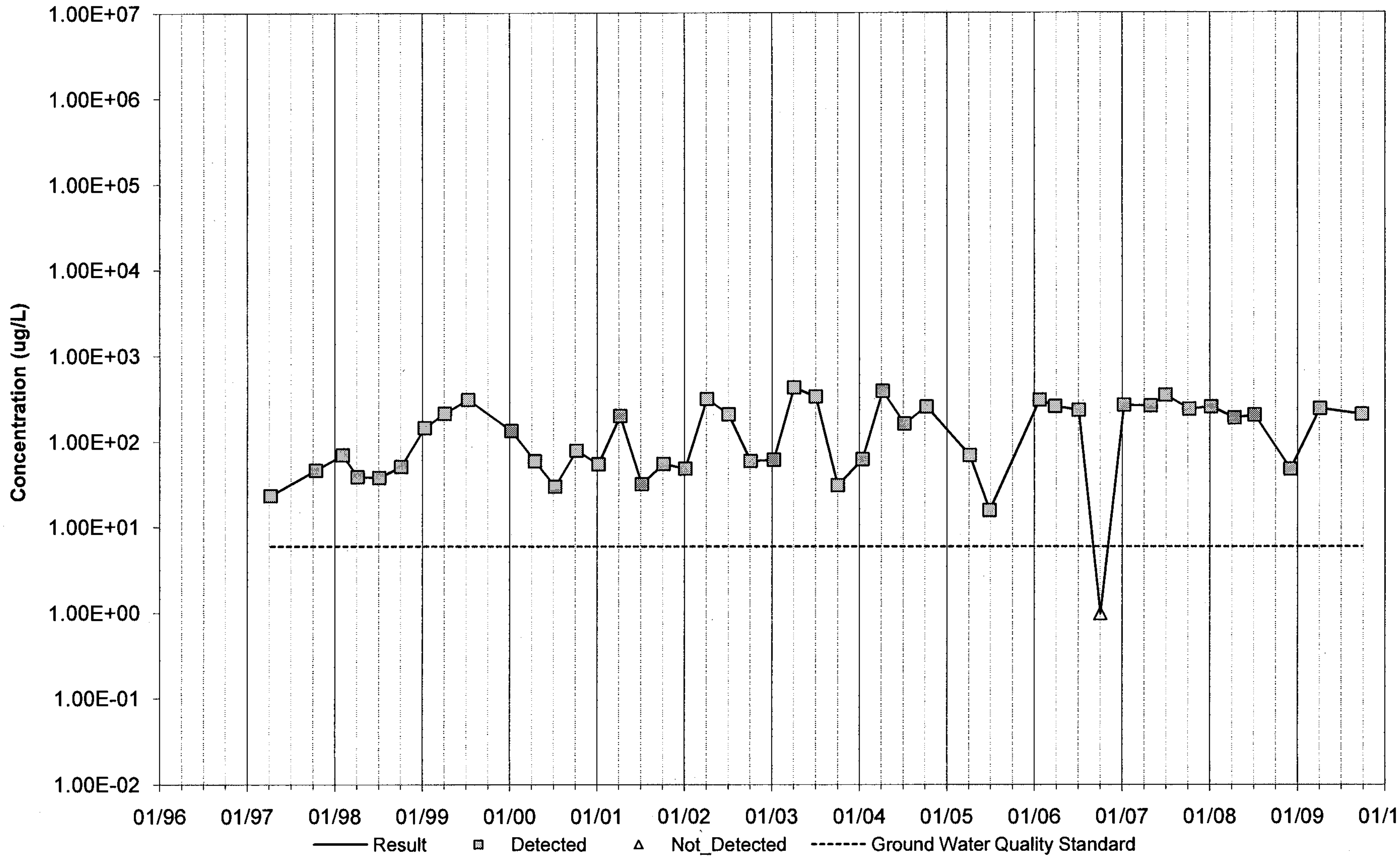
Monitoring Well: AAA
62-53-3 (Aniline)
Log Scale Concentrations



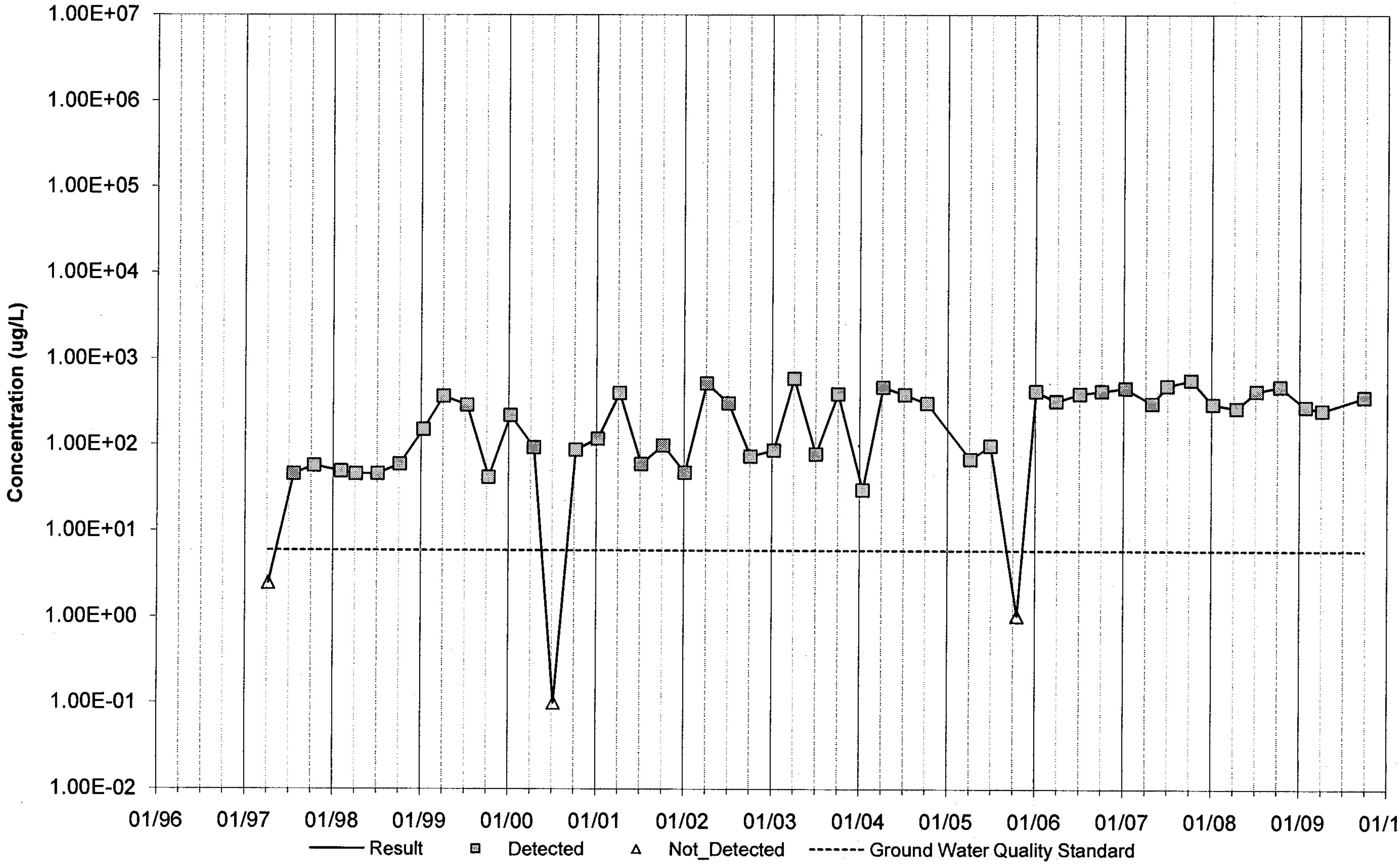
Monitoring Well: MW-2
62-53-3 (Aniline)
Log Scale Concentrations



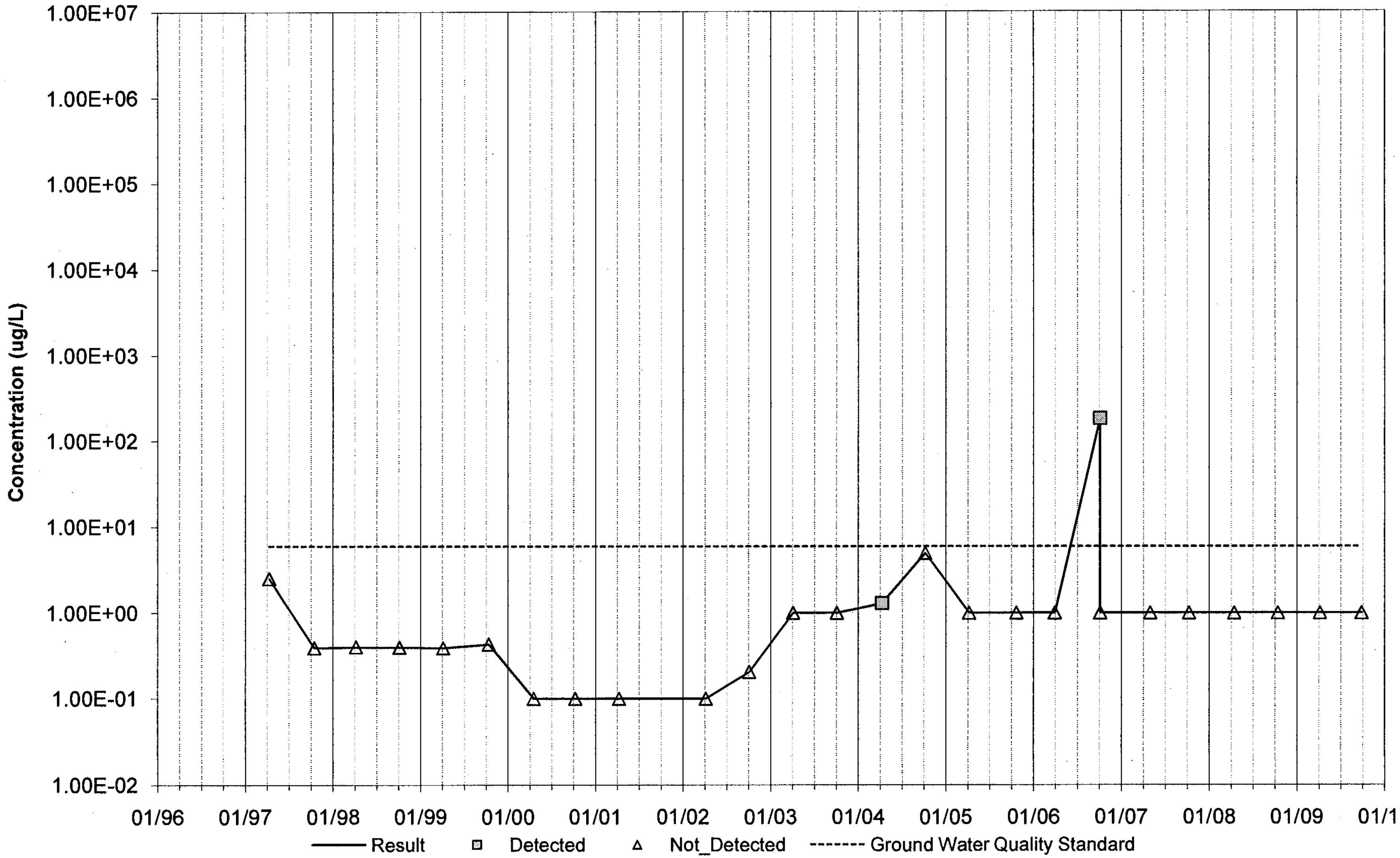
Monitoring Well: PW-2
62-53-3 (Aniline)
Log Scale Concentrations



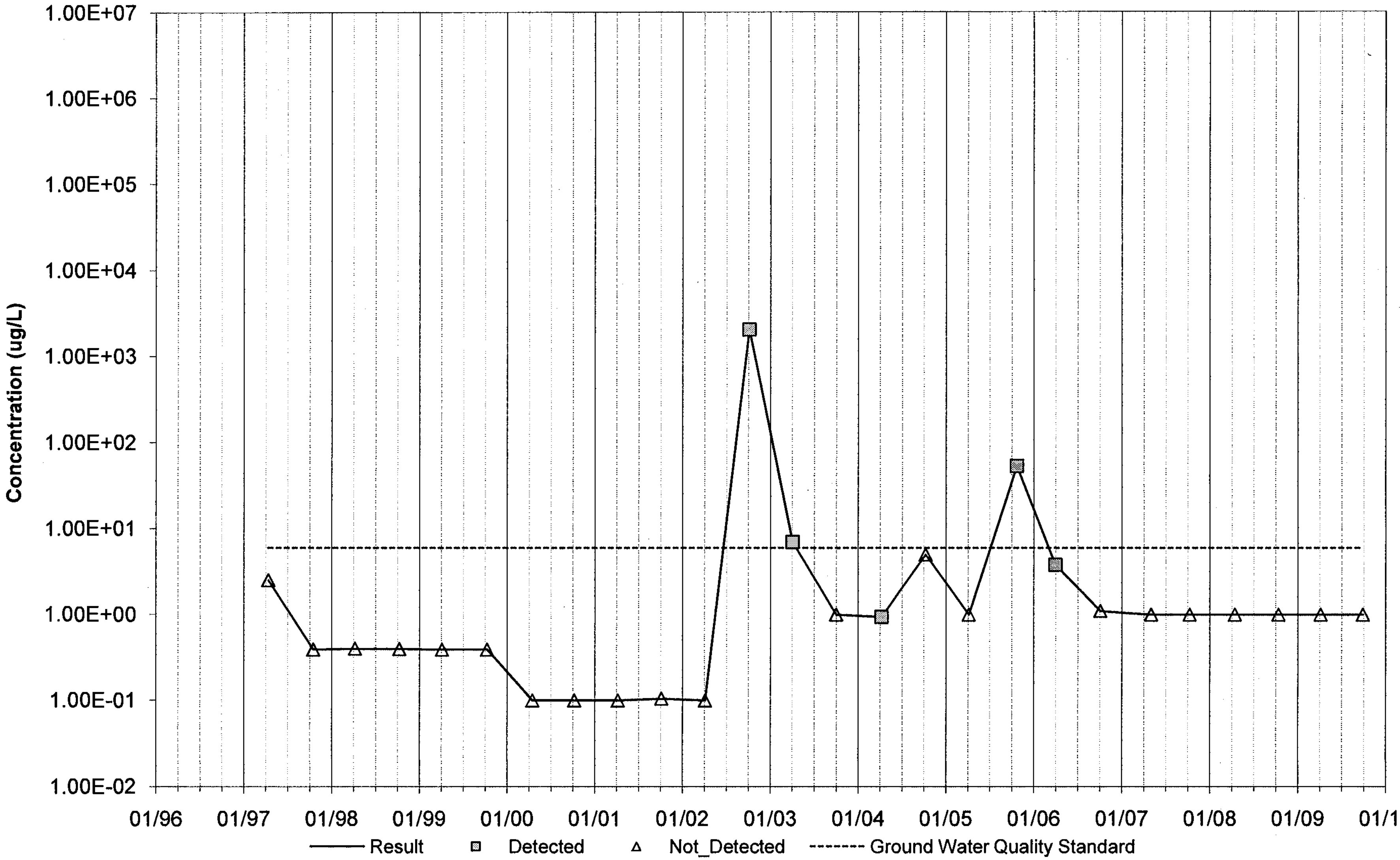
Monitoring Well: PW-3
62-53-3 (Aniline)
Log Scale Concentrations



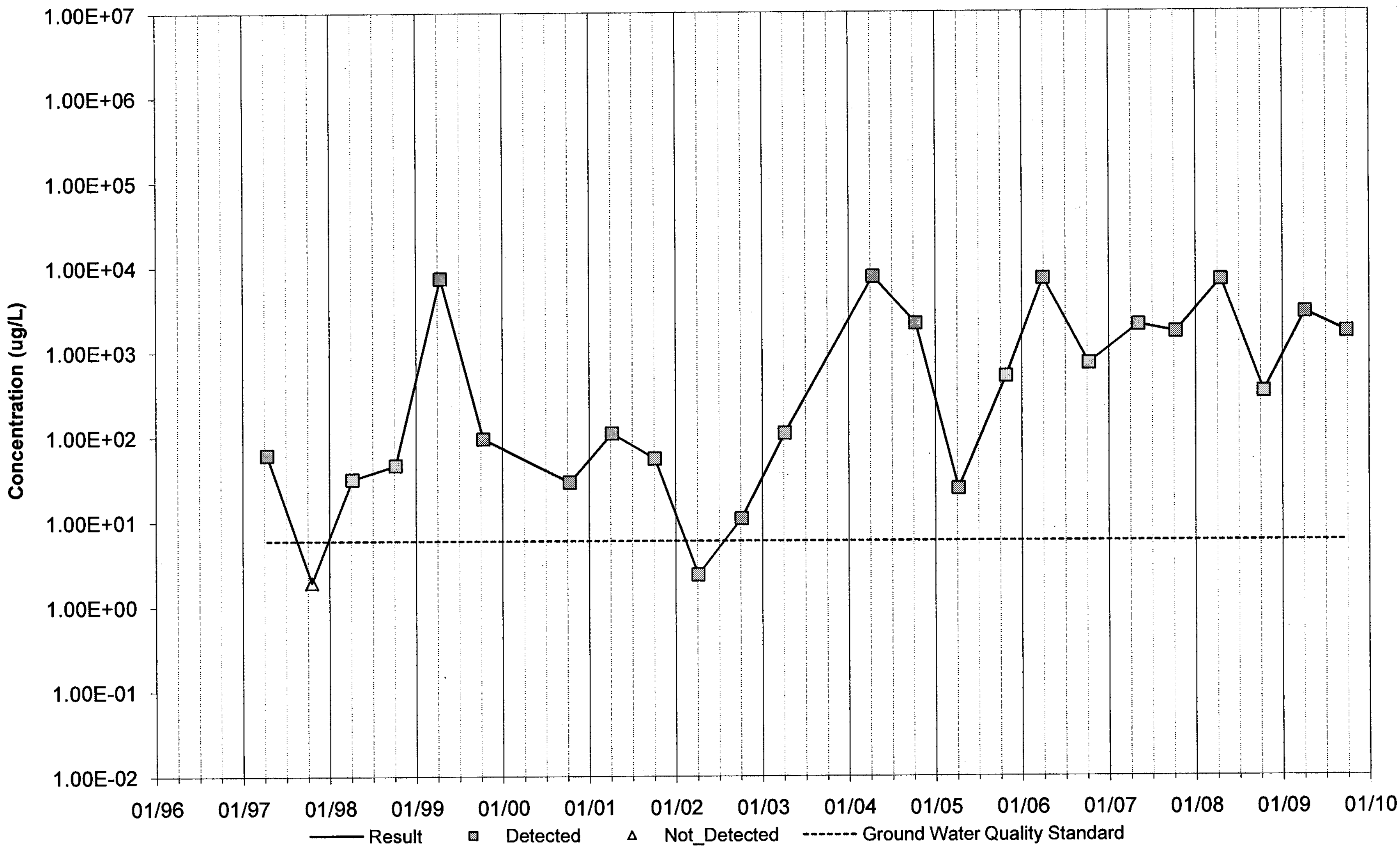
Monitoring Well: RCRA-D14
62-53-3 (Aniline)
Log Scale Concentrations

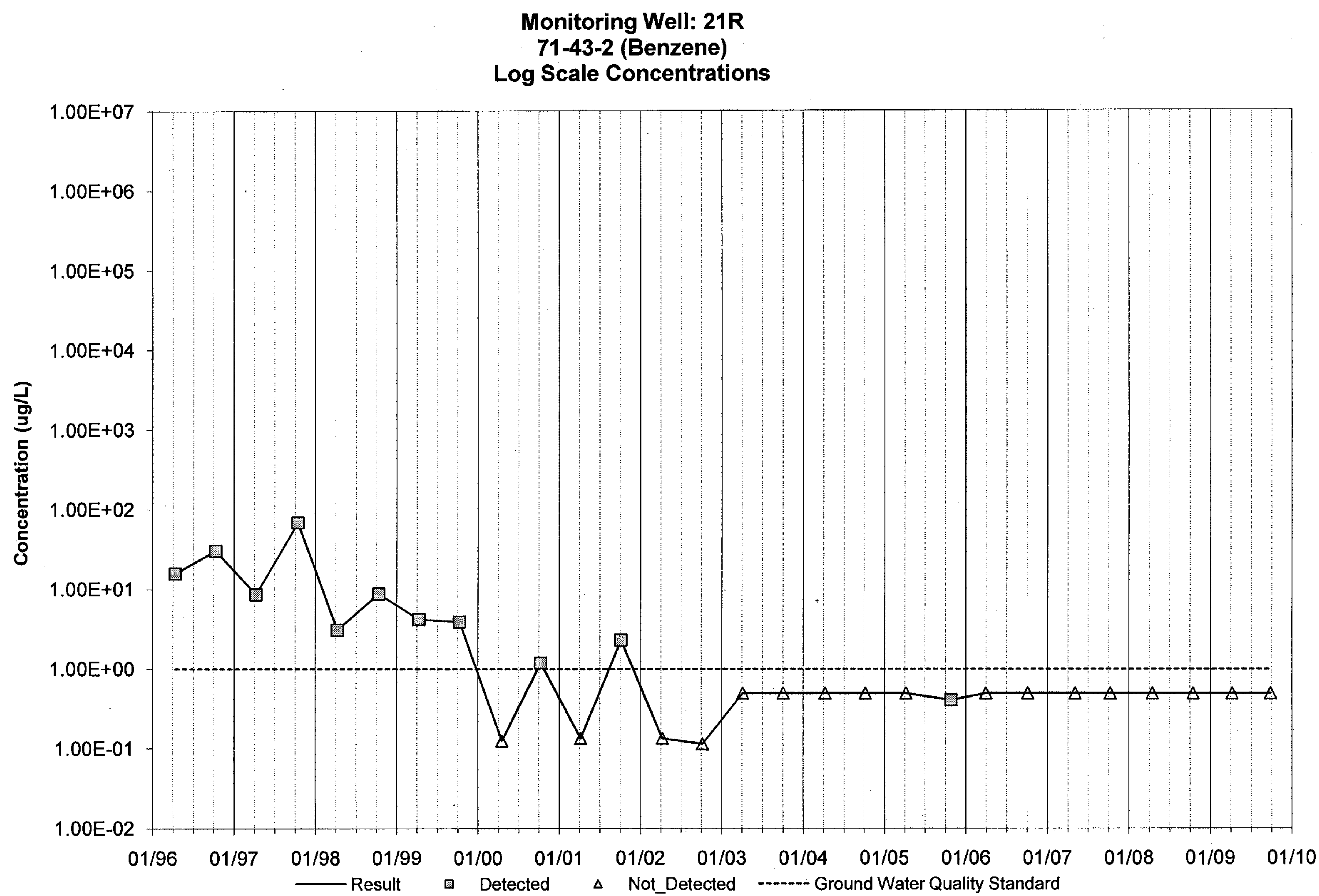


Monitoring Well: RCRA-D9
62-53-3 (Aniline)
Log Scale Concentrations



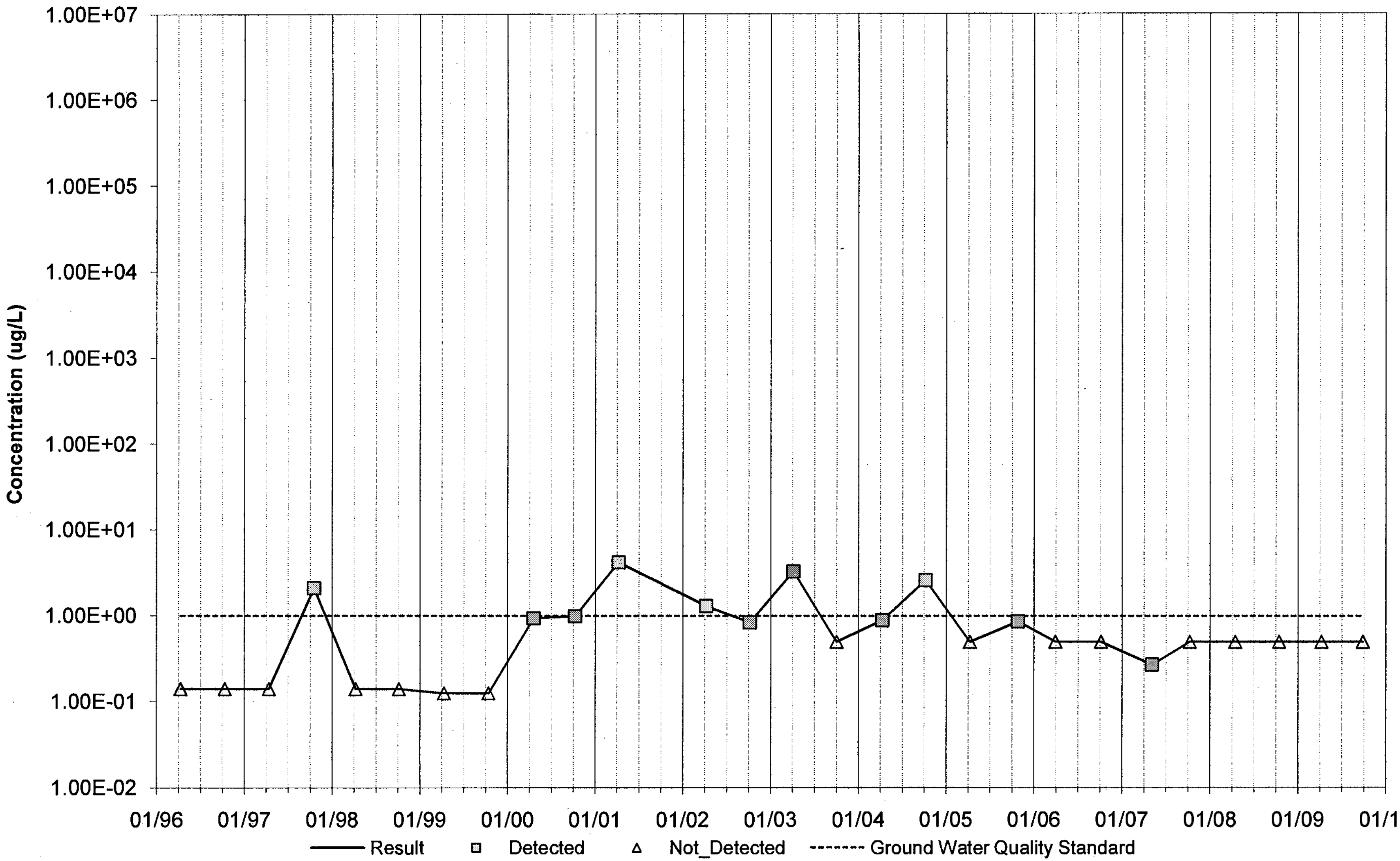
Monitoring Well: TFP-94-1R
62-53-3 (Aniline)
Log Scale Concentrations

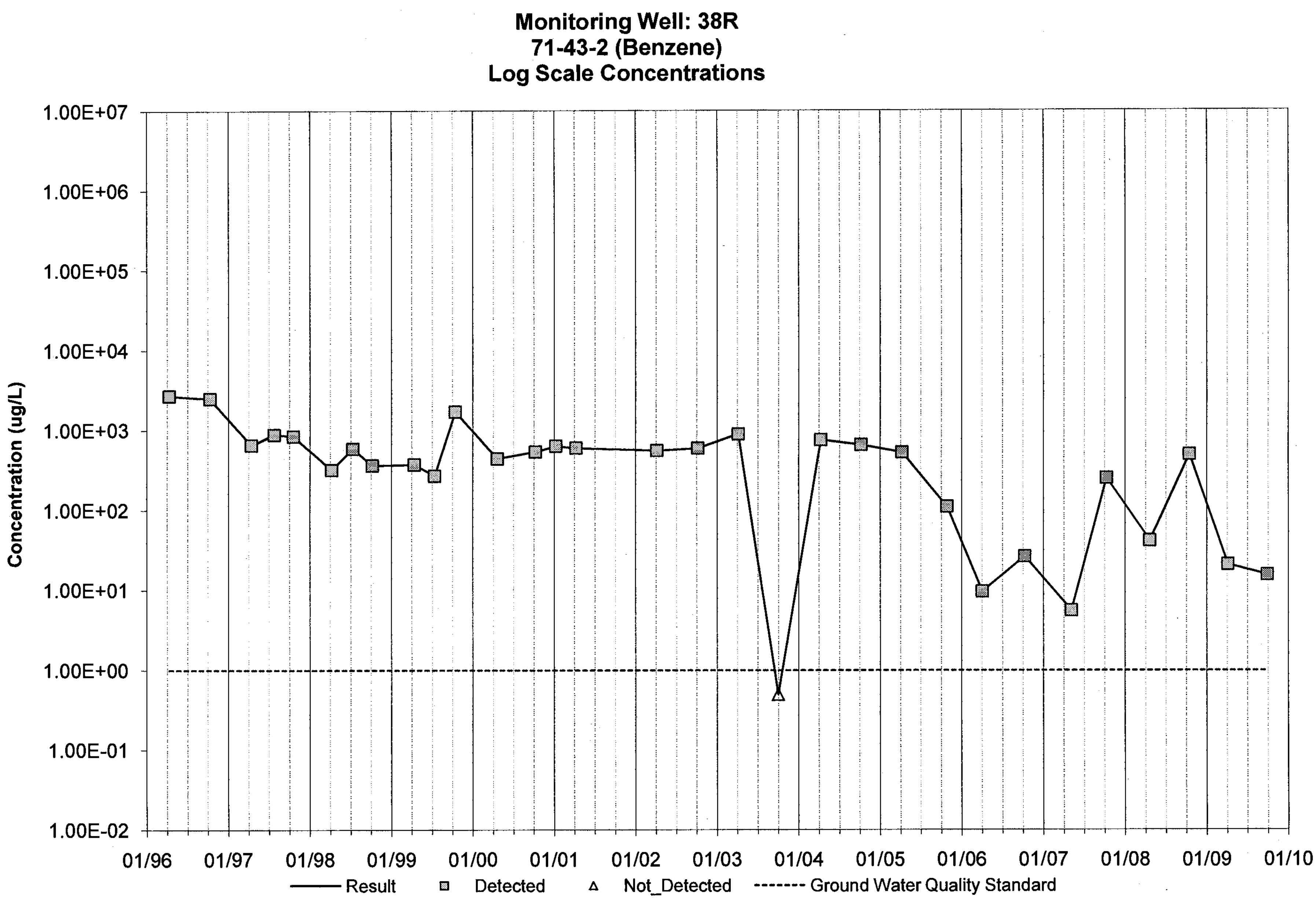




Monitoring Well: 21R
71-43-2 (Benzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

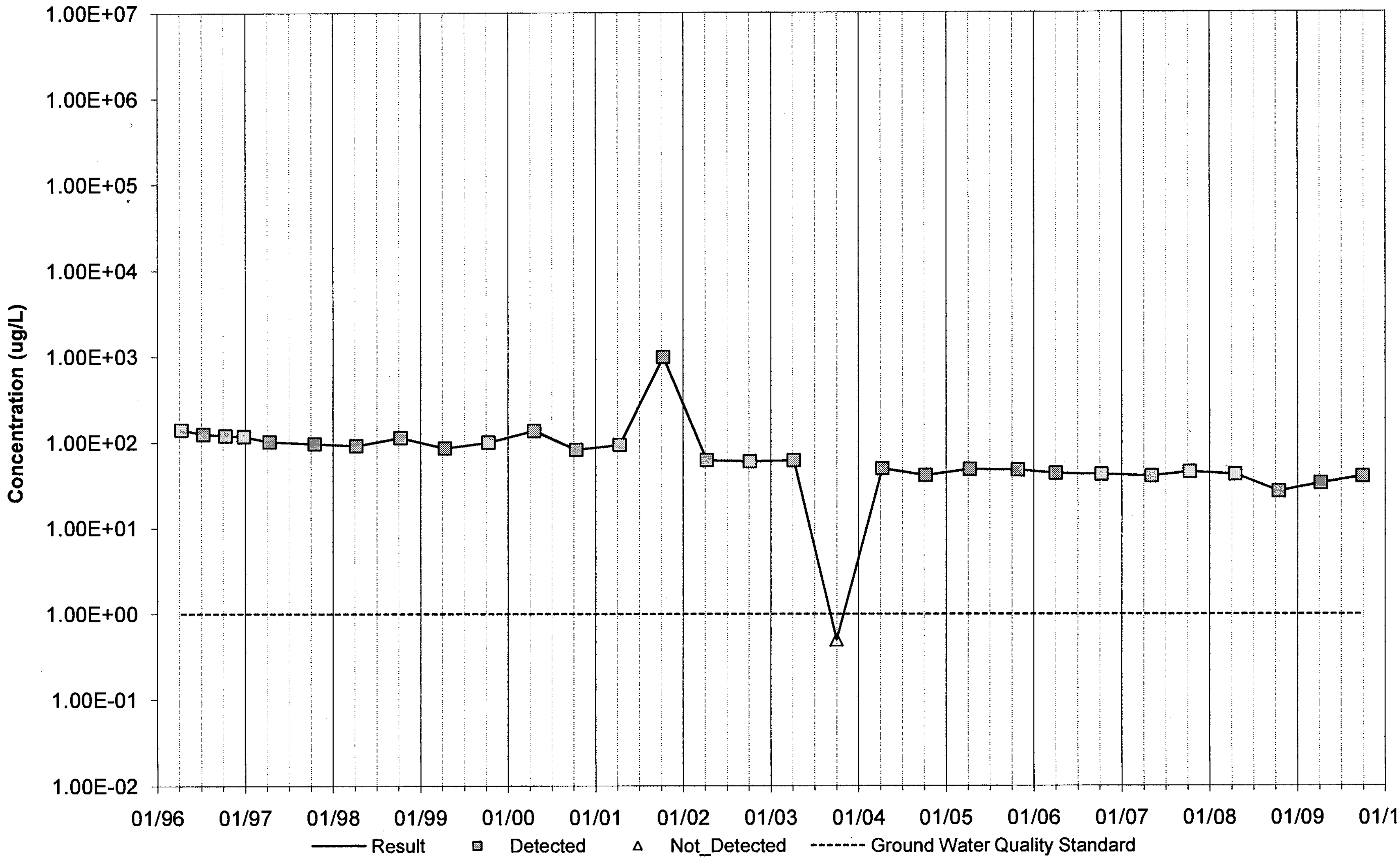
Monitoring Well: 32R
71-43-2 (Benzene)
Log Scale Concentrations



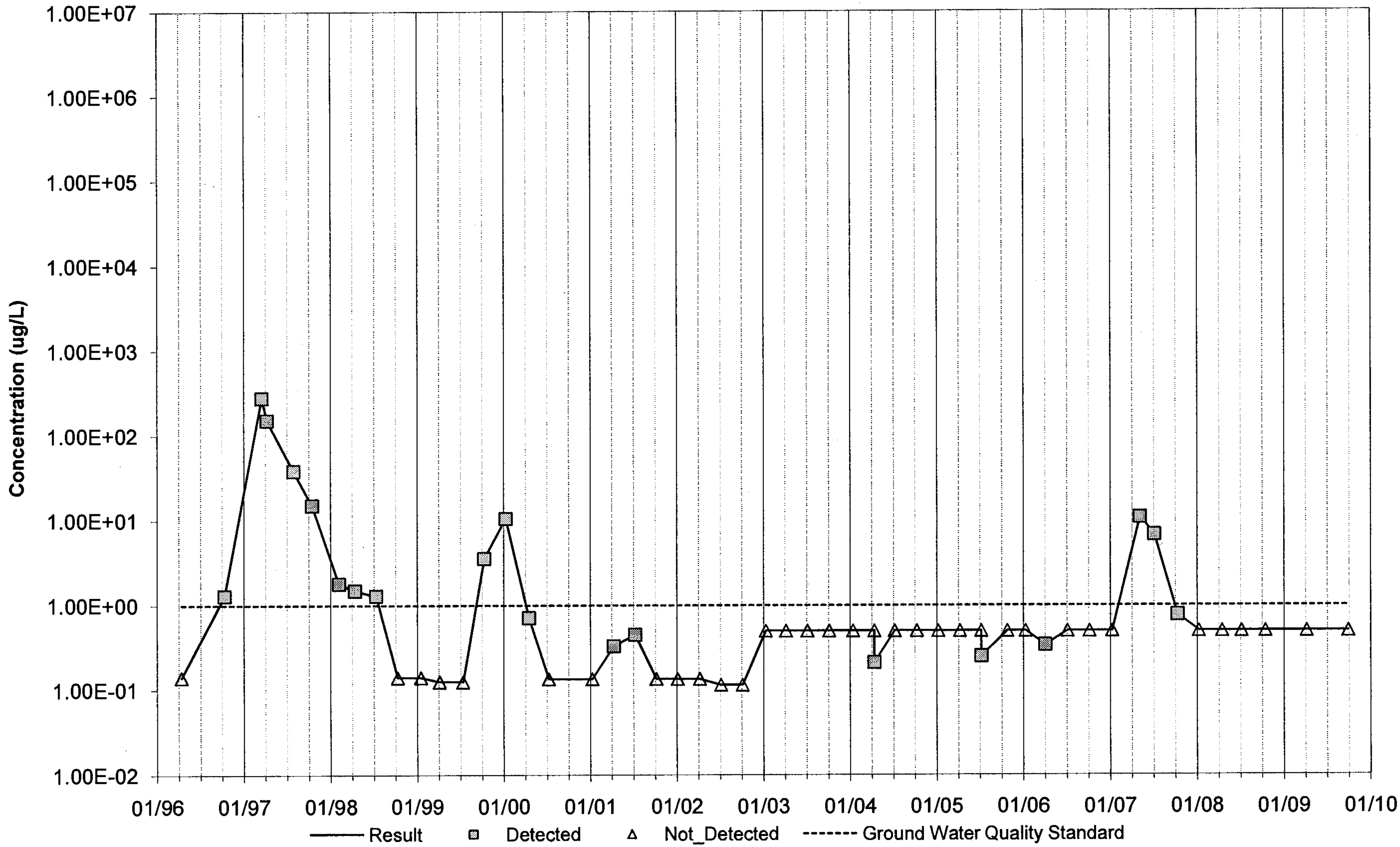


Monitoring Well: 38R
71-43-2 (Benzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

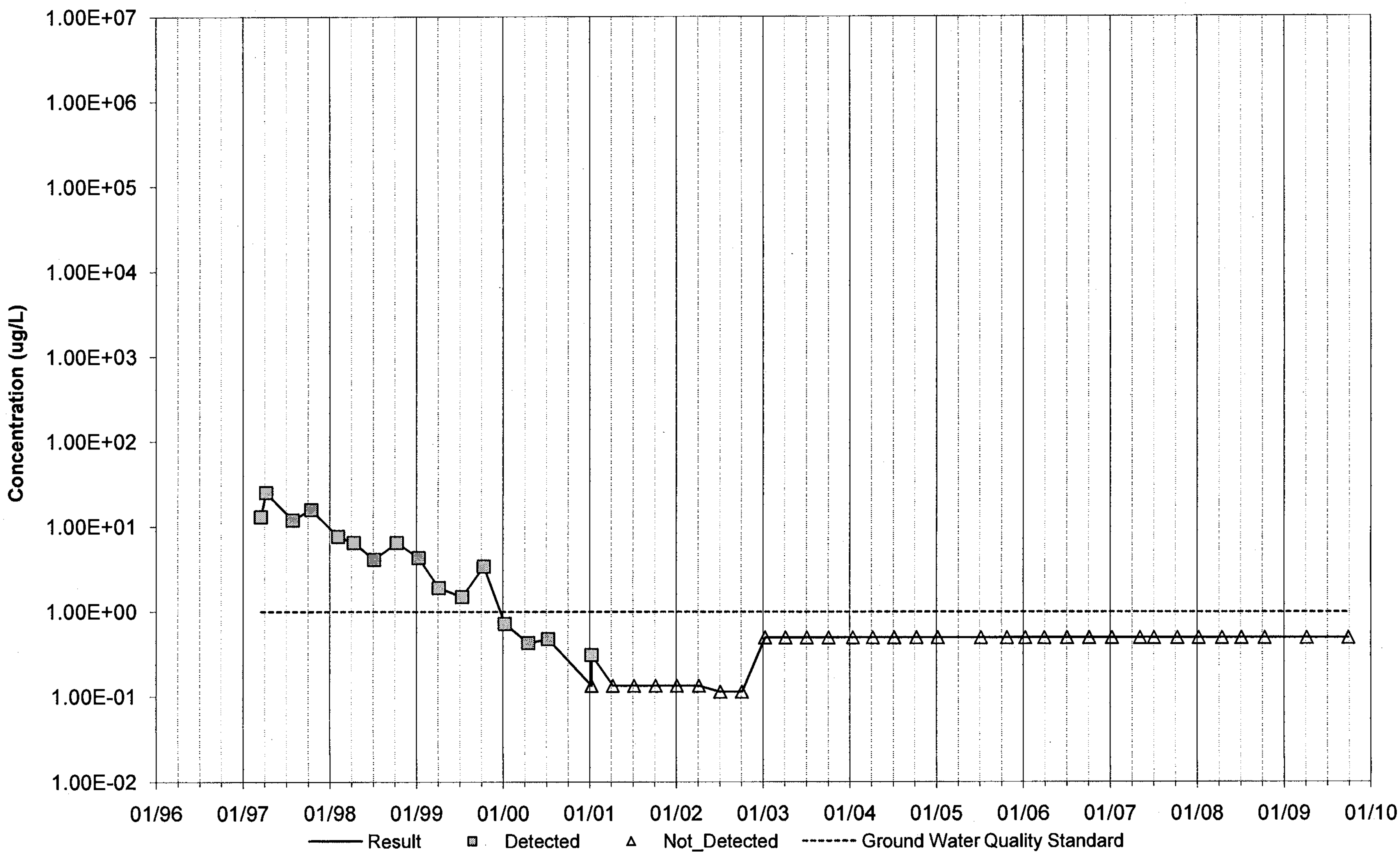
Monitoring Well: 42R
71-43-2 (Benzene)
Log Scale Concentrations



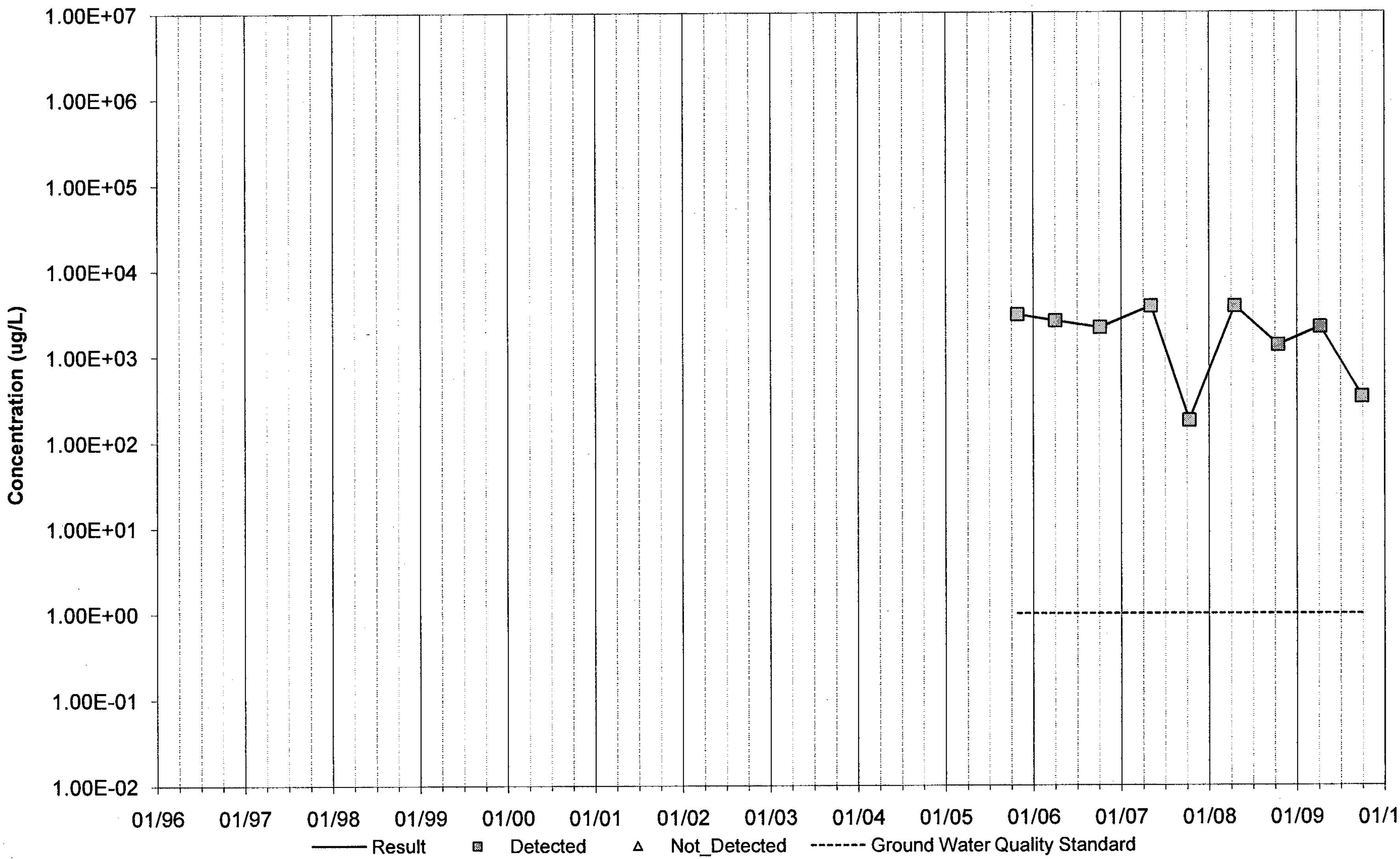
Monitoring Well: AAA
71-43-2 (Benzene)
Log Scale Concentrations



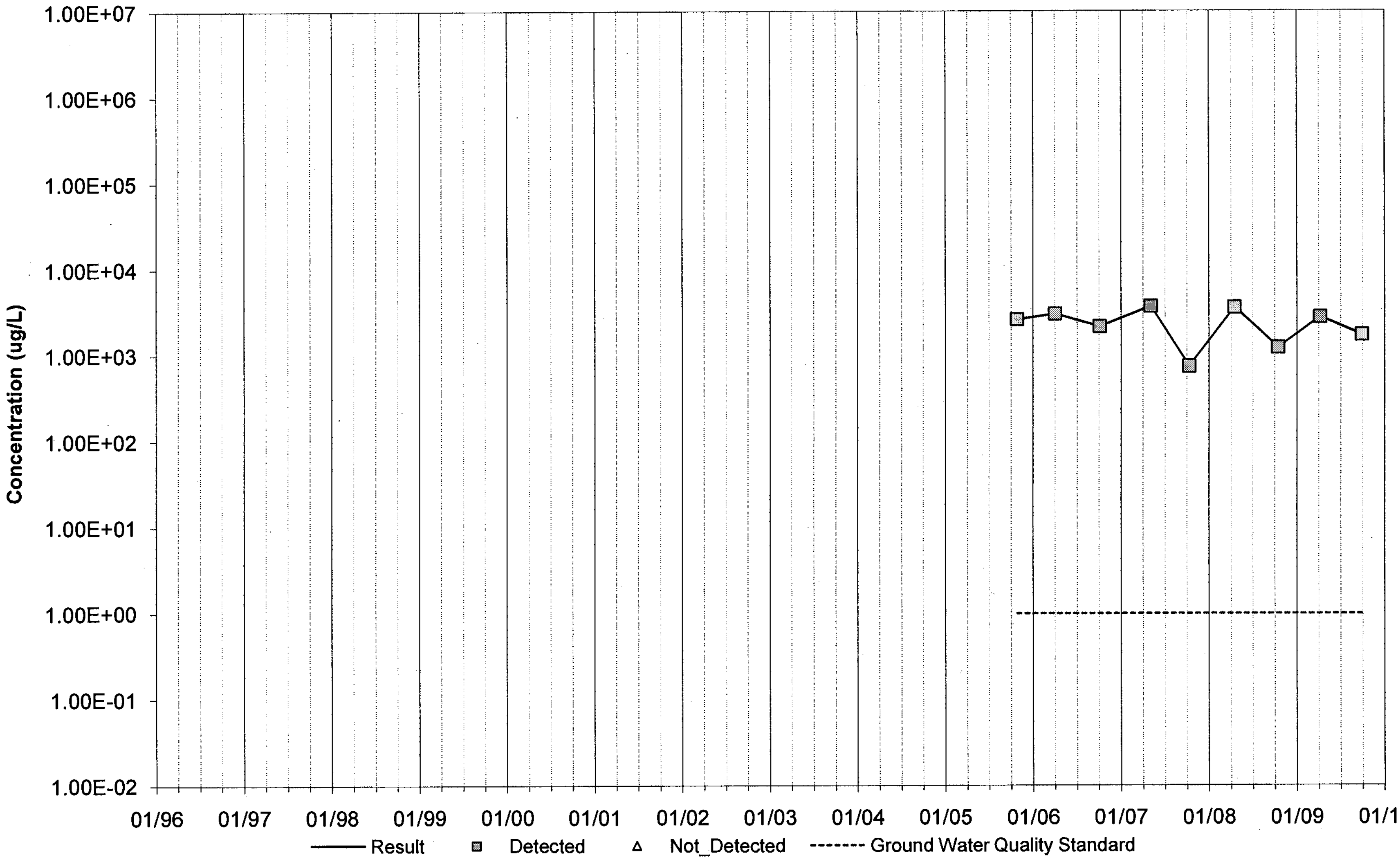
Monitoring Well: CCC-R
71-43-2 (Benzene)
Log Scale Concentrations



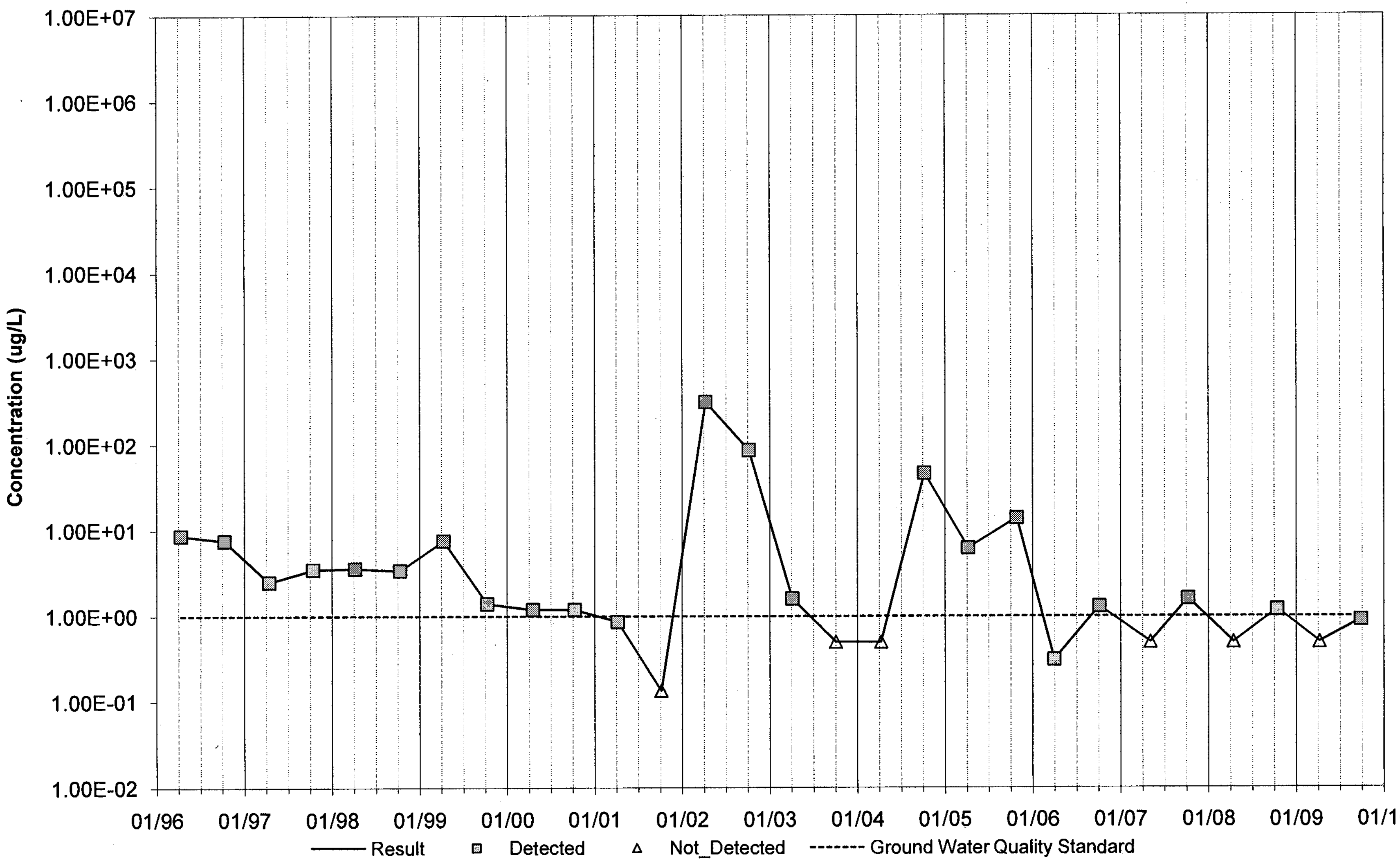
Monitoring Well: MW2 ZA
71-43-2 (Benzene)
Log Scale Concentrations



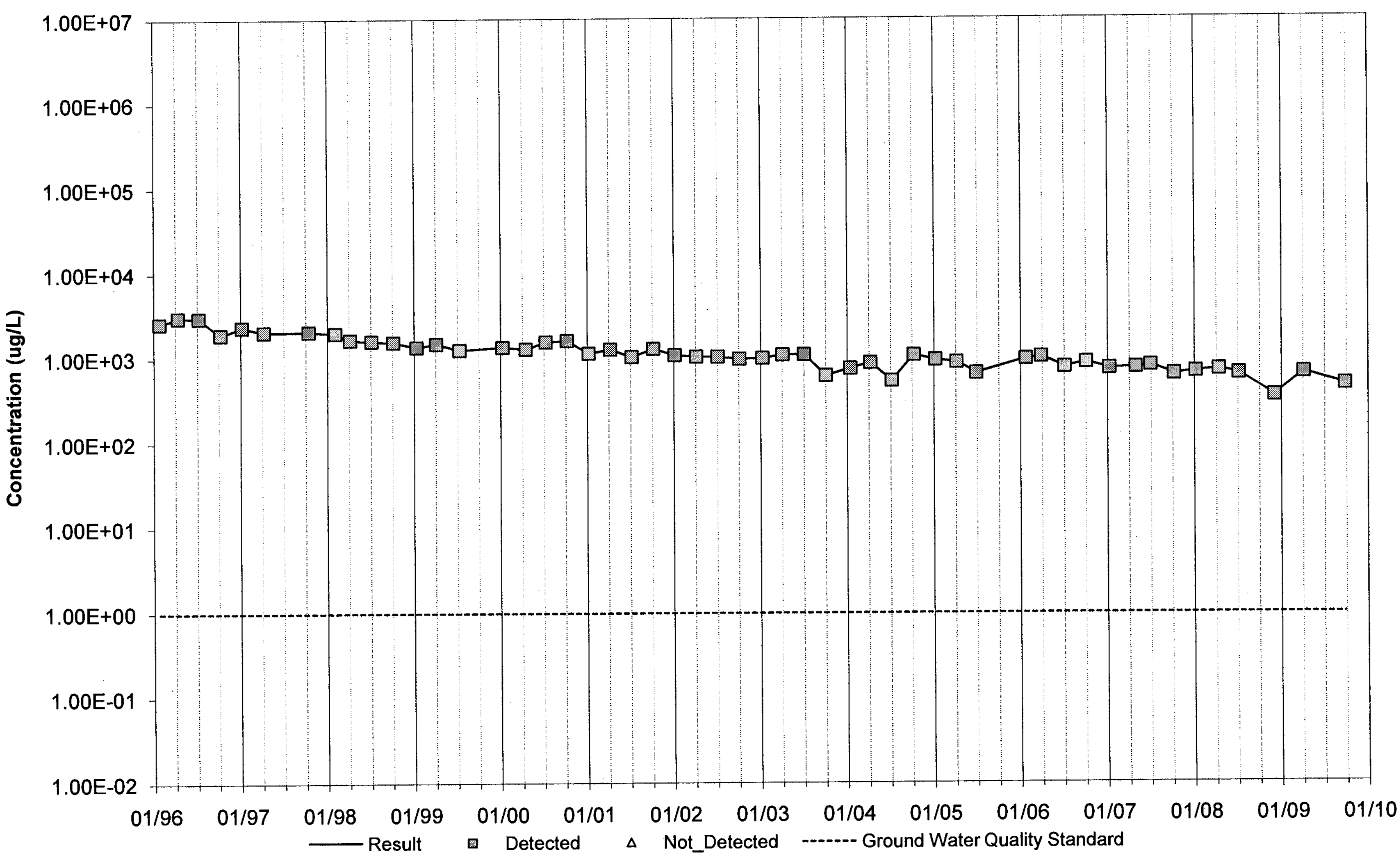
Monitoring Well: MW2 ZB
71-43-2 (Benzene)
Log Scale Concentrations



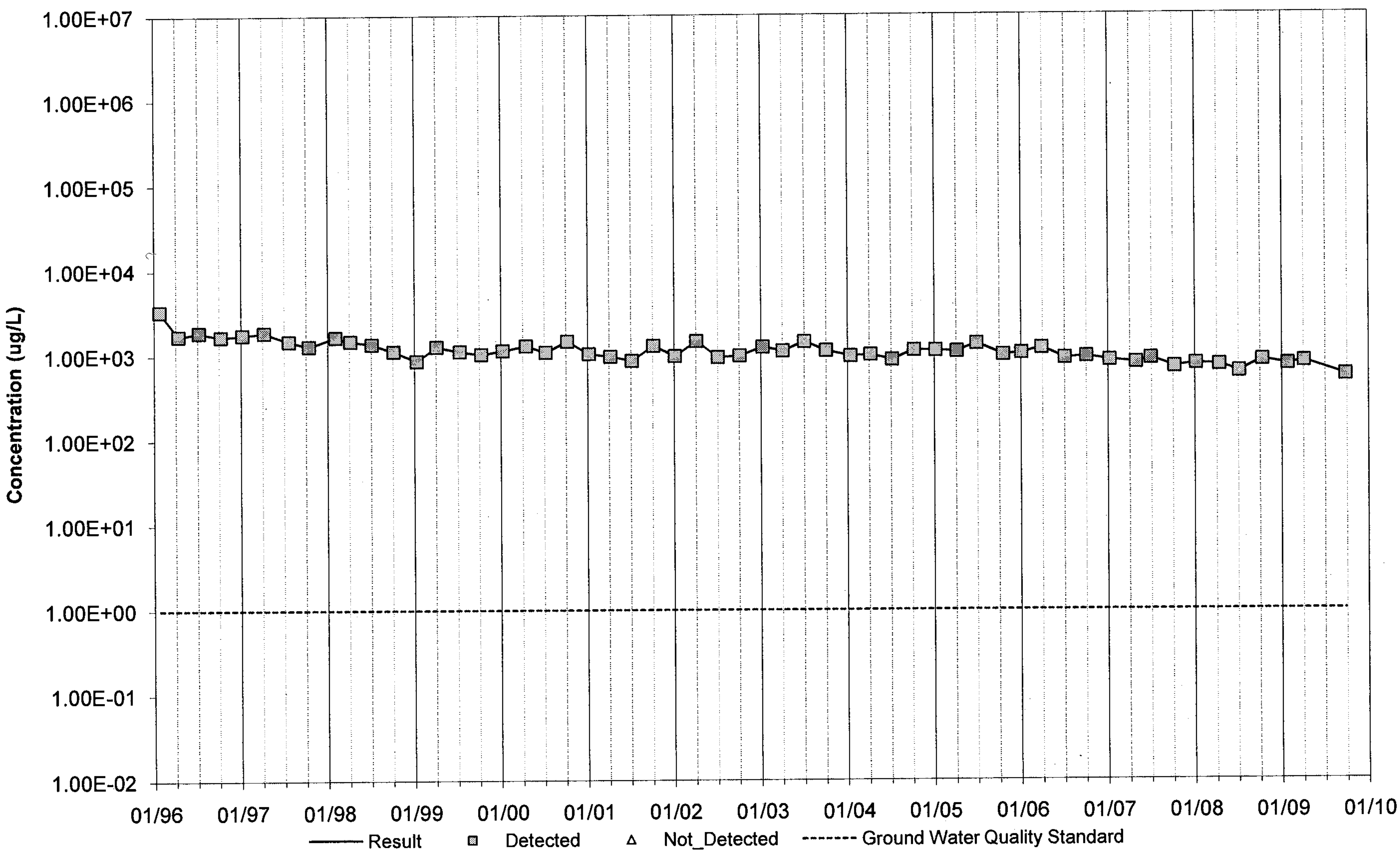
Monitoring Well: O-R
71-43-2 (Benzene)
Log Scale Concentrations



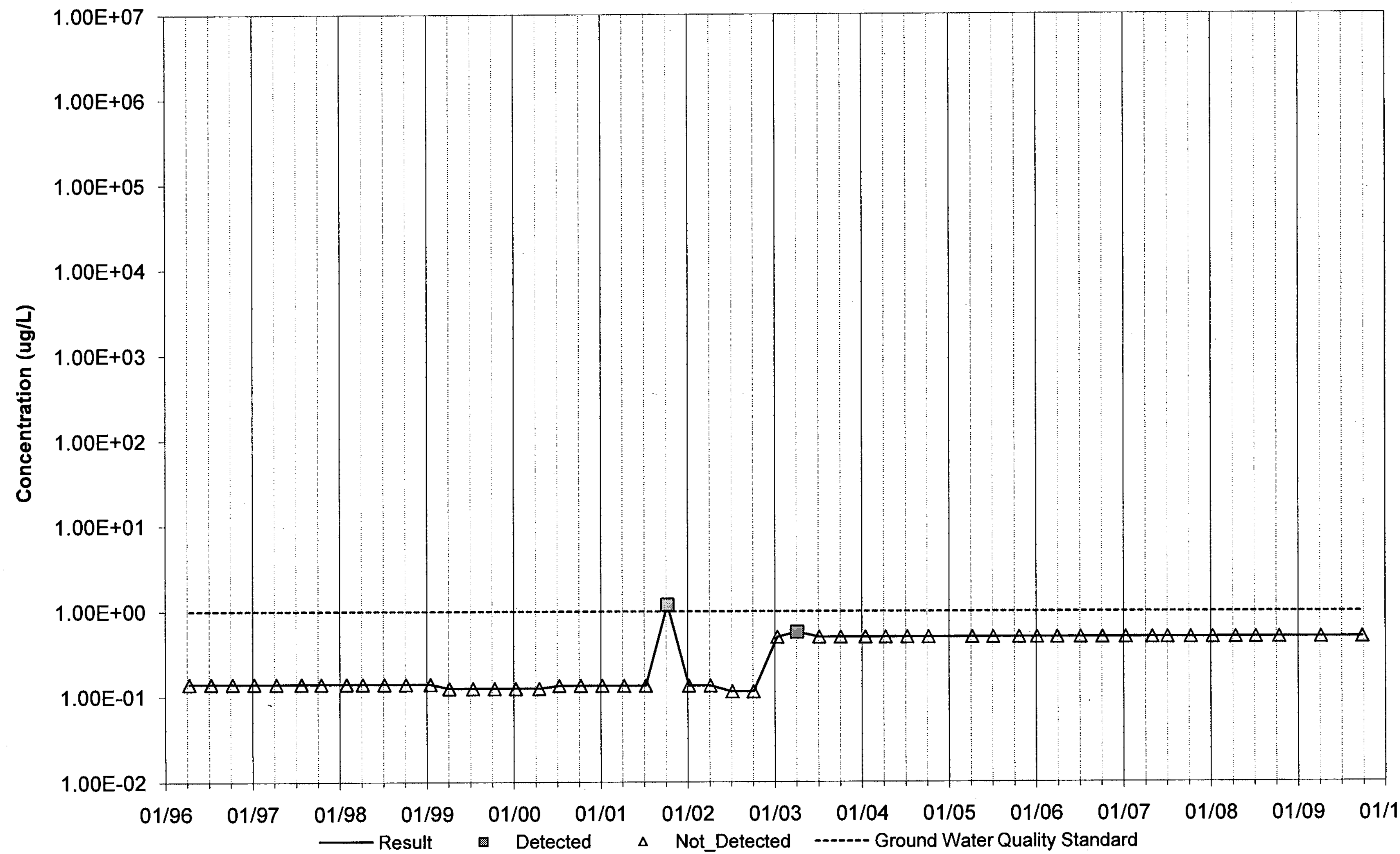
Monitoring Well: PW-2
71-43-2 (Benzene)
Log Scale Concentrations



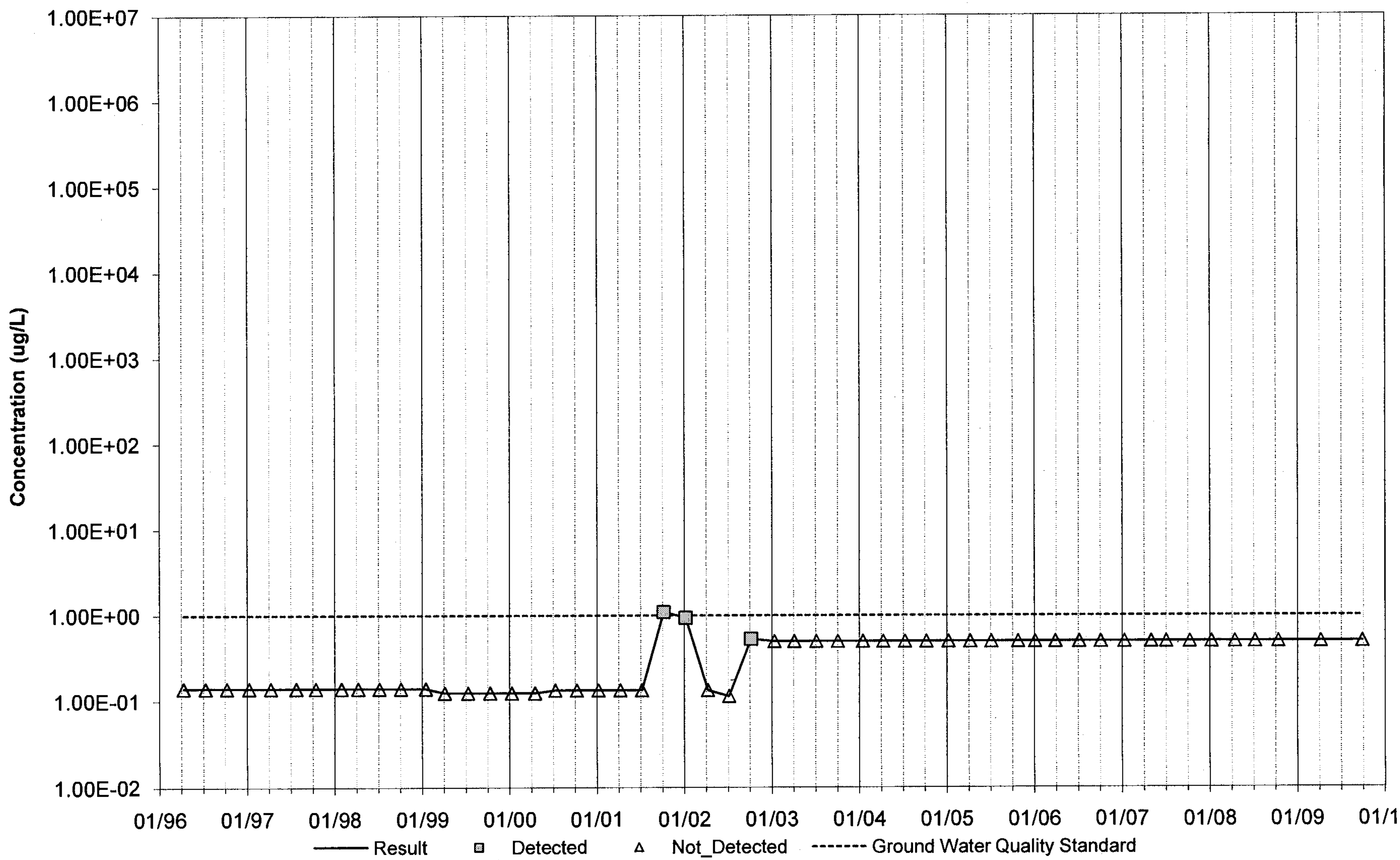
Monitoring Well: PW-3
71-43-2 (Benzene)
Log Scale Concentrations



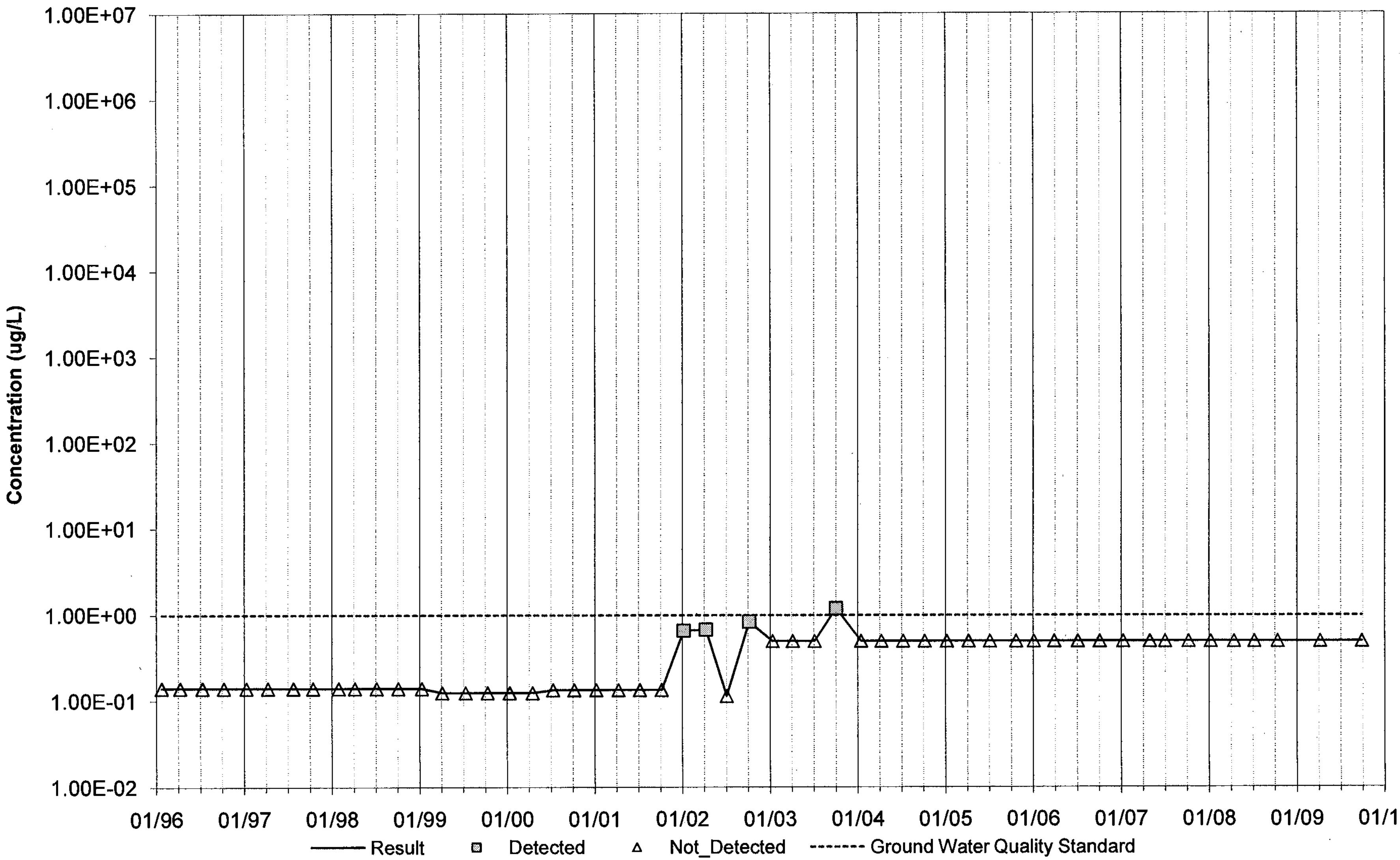
Monitoring Well: RCRA-D14
71-43-2 (Benzene)
Log Scale Concentrations



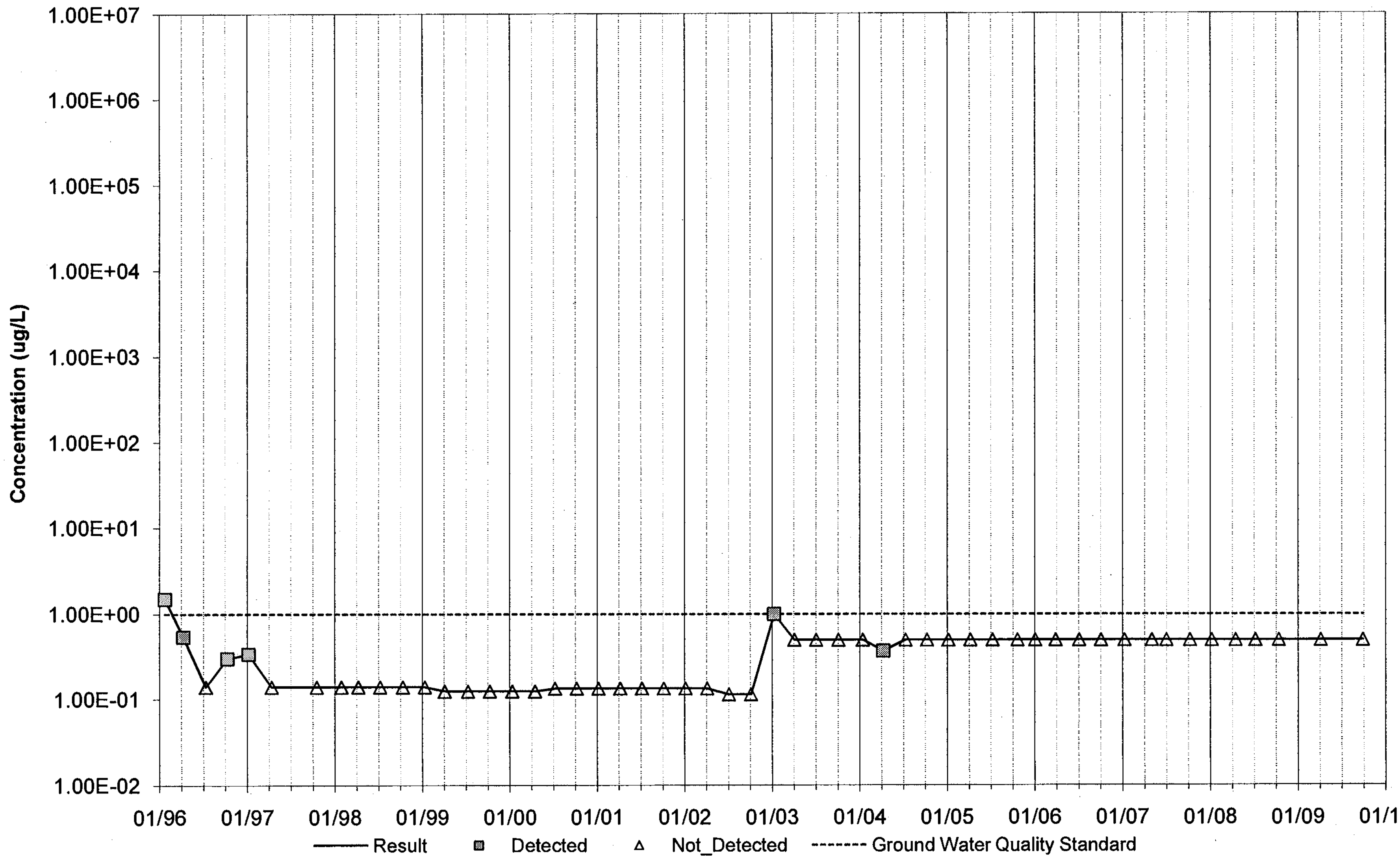
Monitoring Well: RCRA-D2
71-43-2 (Benzene)
Log Scale Concentrations



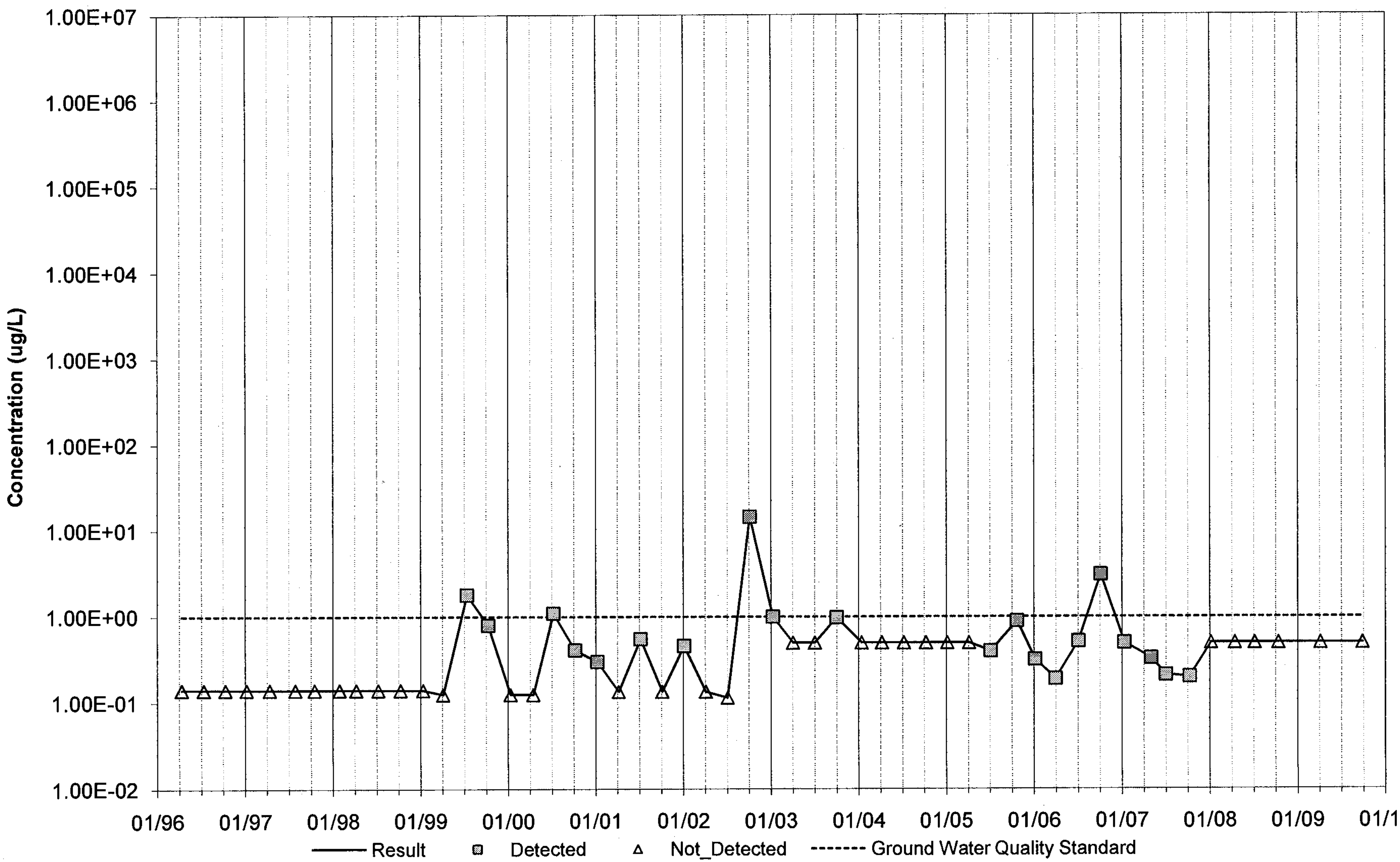
Monitoring Well: RCRA-D4
71-43-2 (Benzene)
Log Scale Concentrations

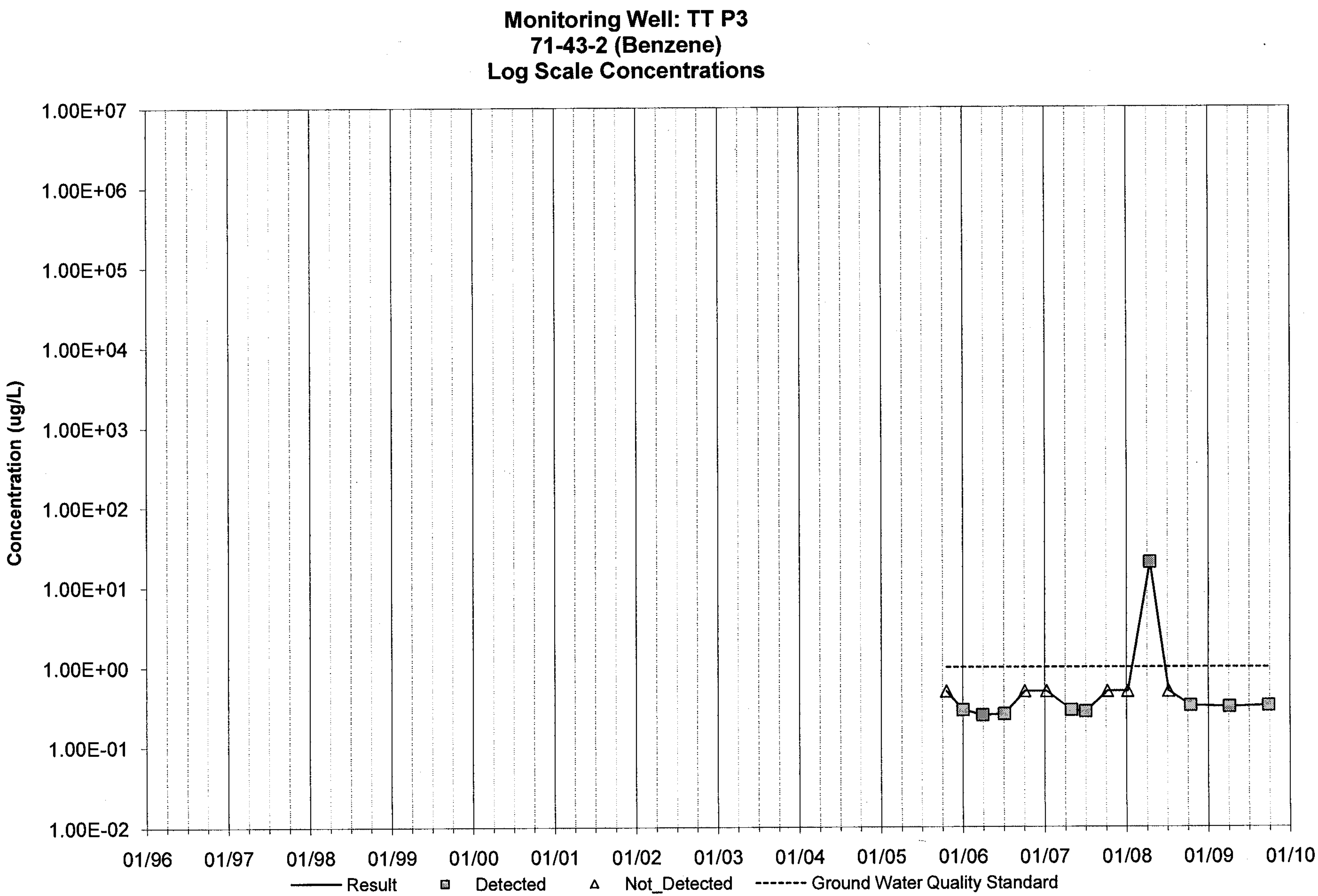


Monitoring Well: RCRA-D7
71-43-2 (Benzene)
Log Scale Concentrations

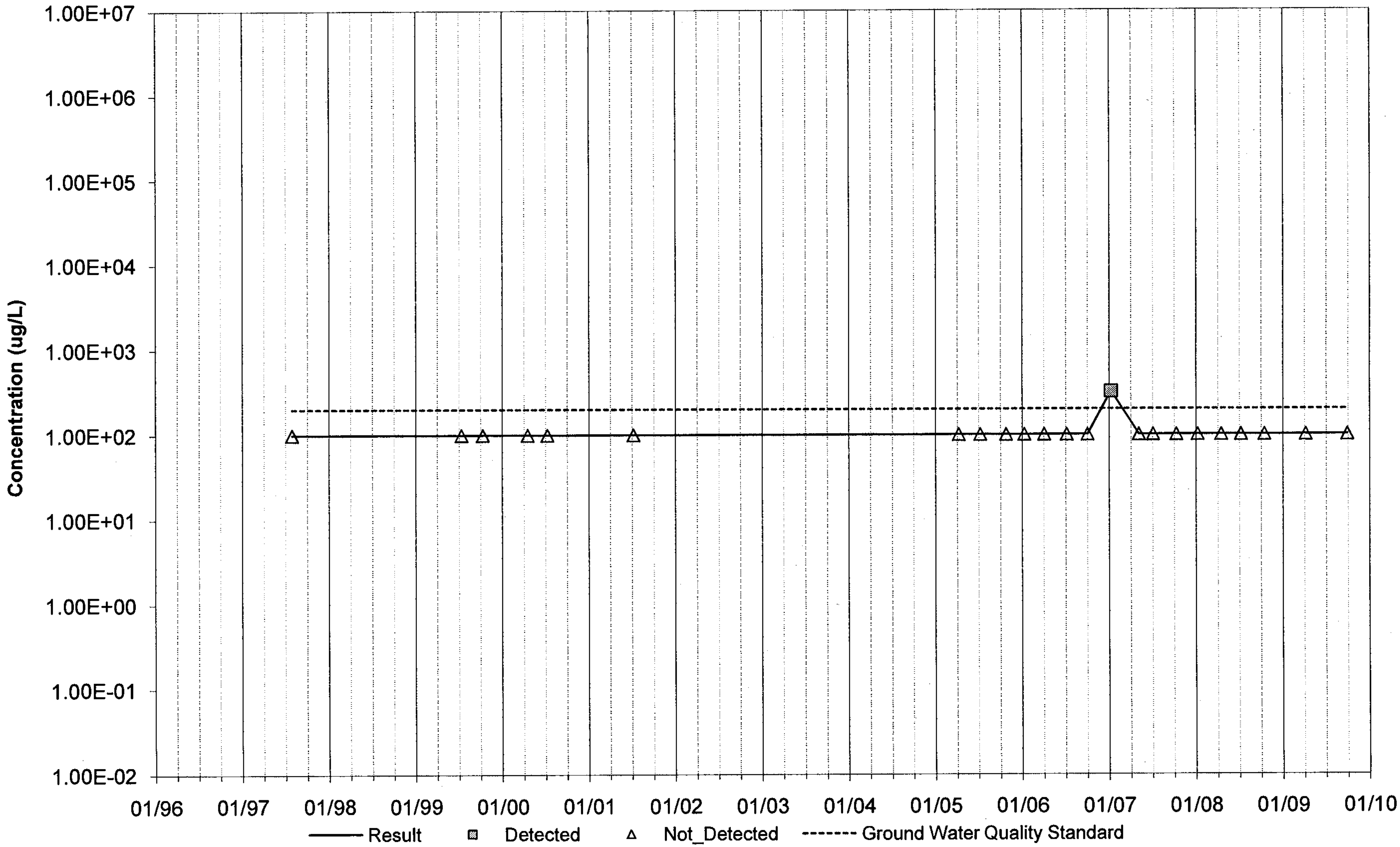


Monitoring Well: RCRA-D9
71-43-2 (Benzene)
Log Scale Concentrations

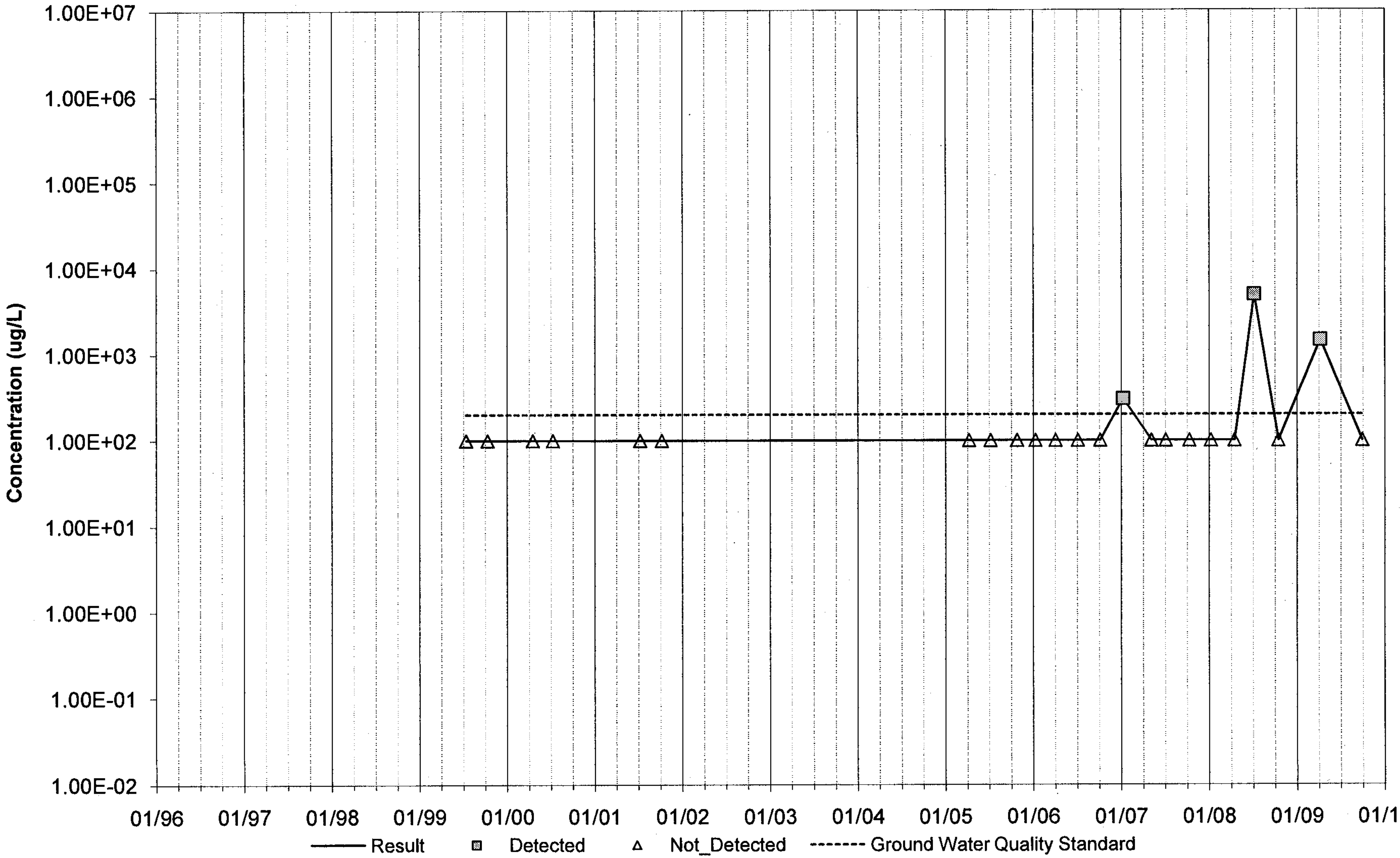



Monitoring Well: TT P3
71-43-2 (Benzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

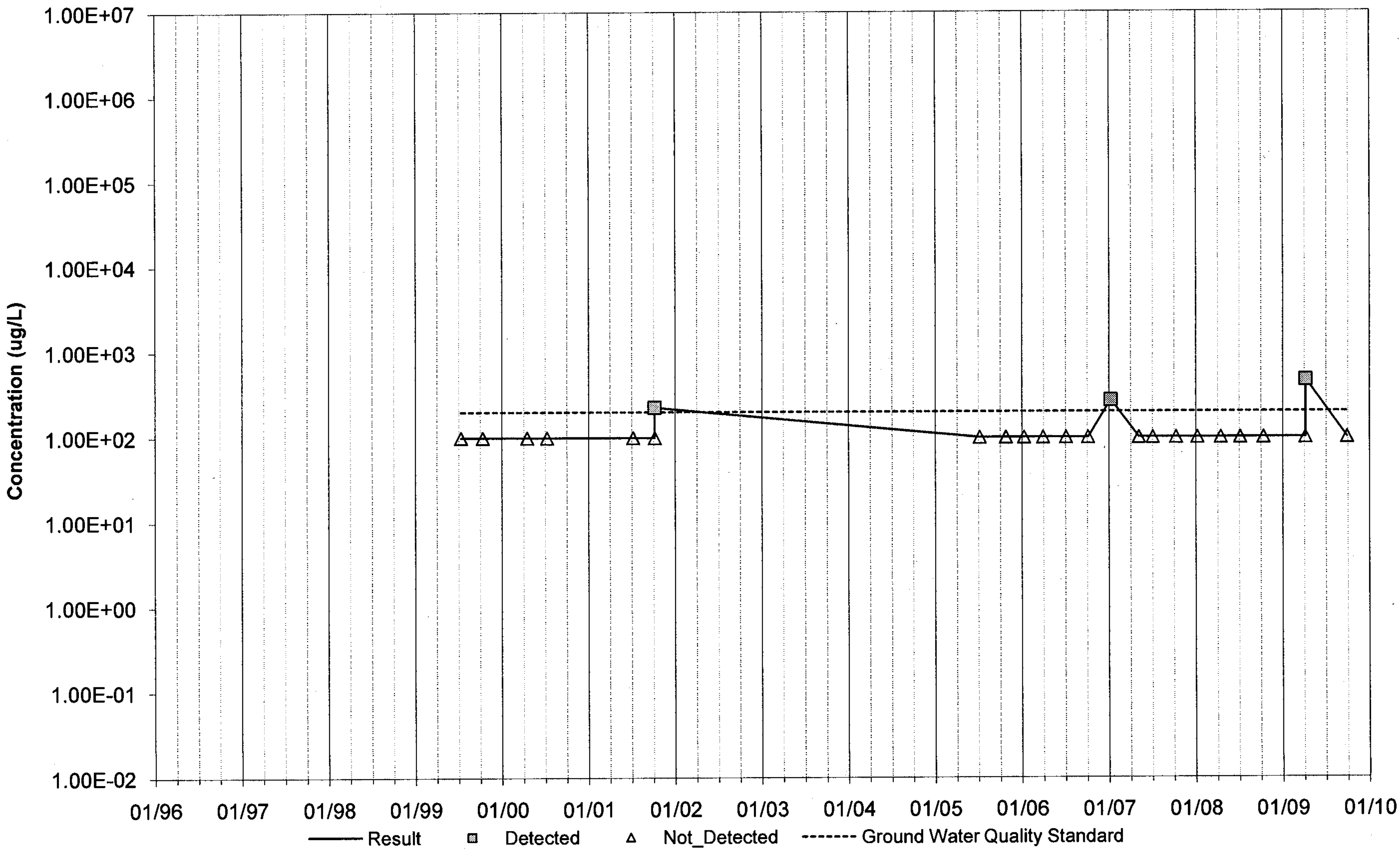
Monitoring Well: 16-MW-2
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



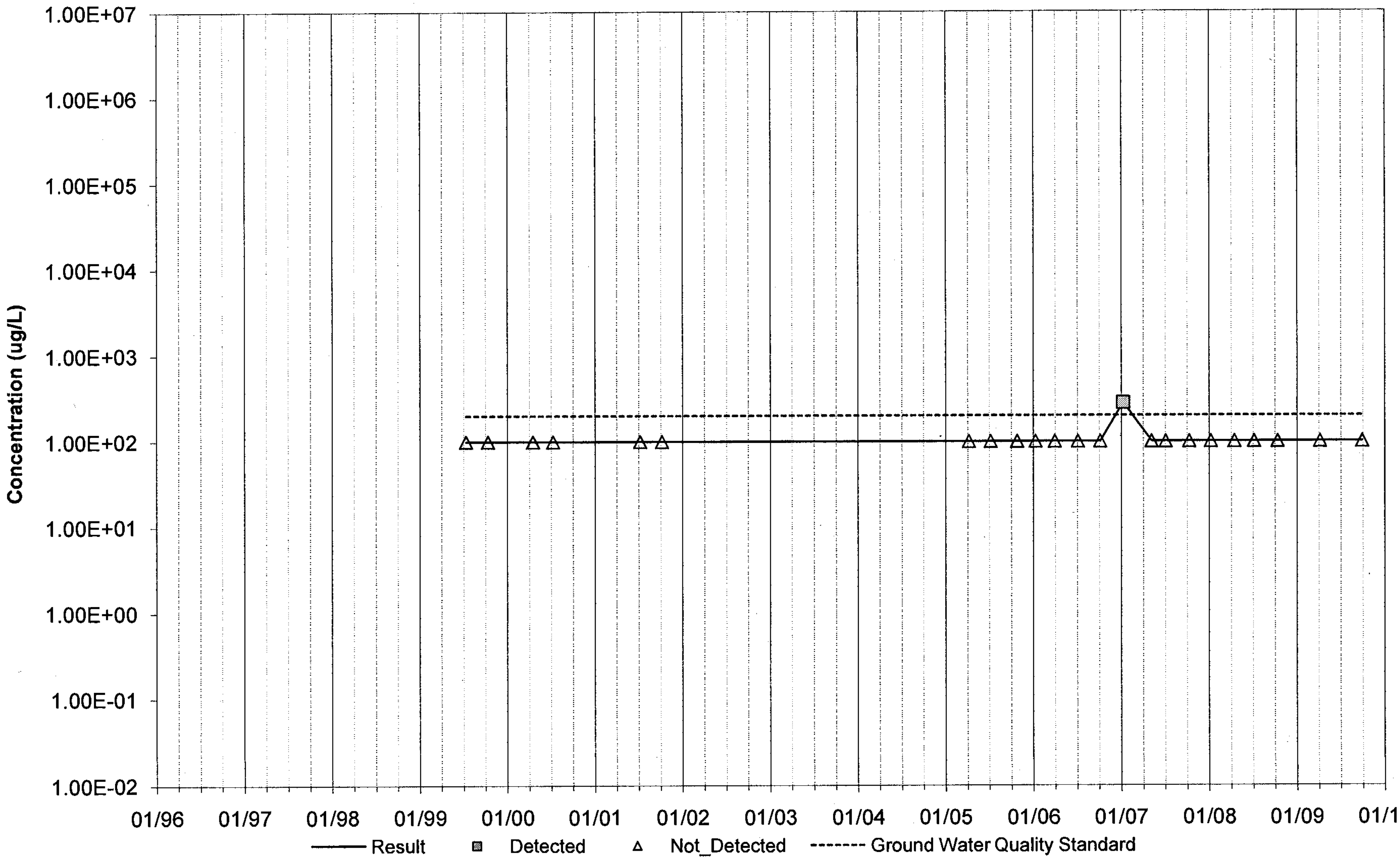
Monitoring Well: AAA
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



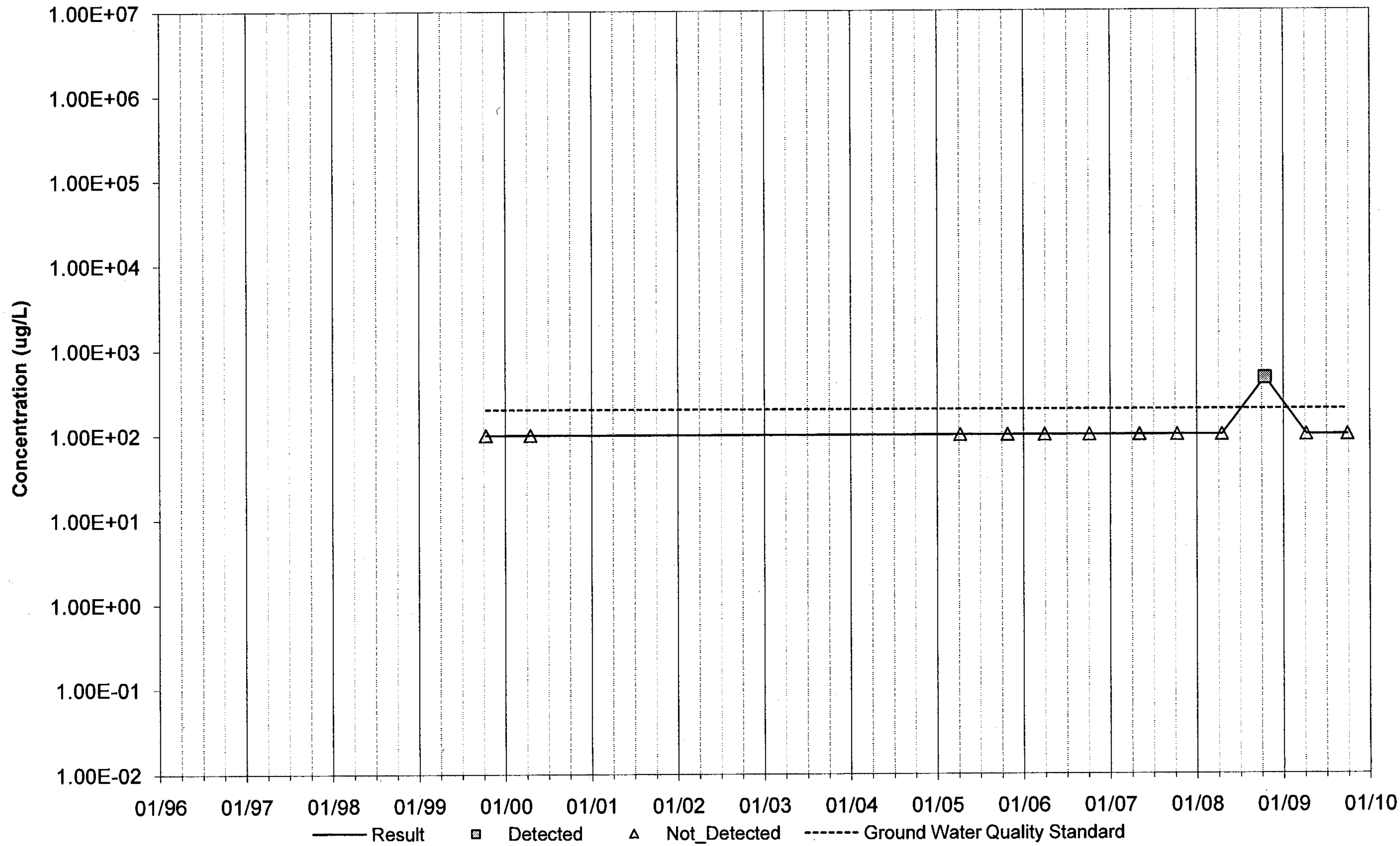
Monitoring Well: CCC-R
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



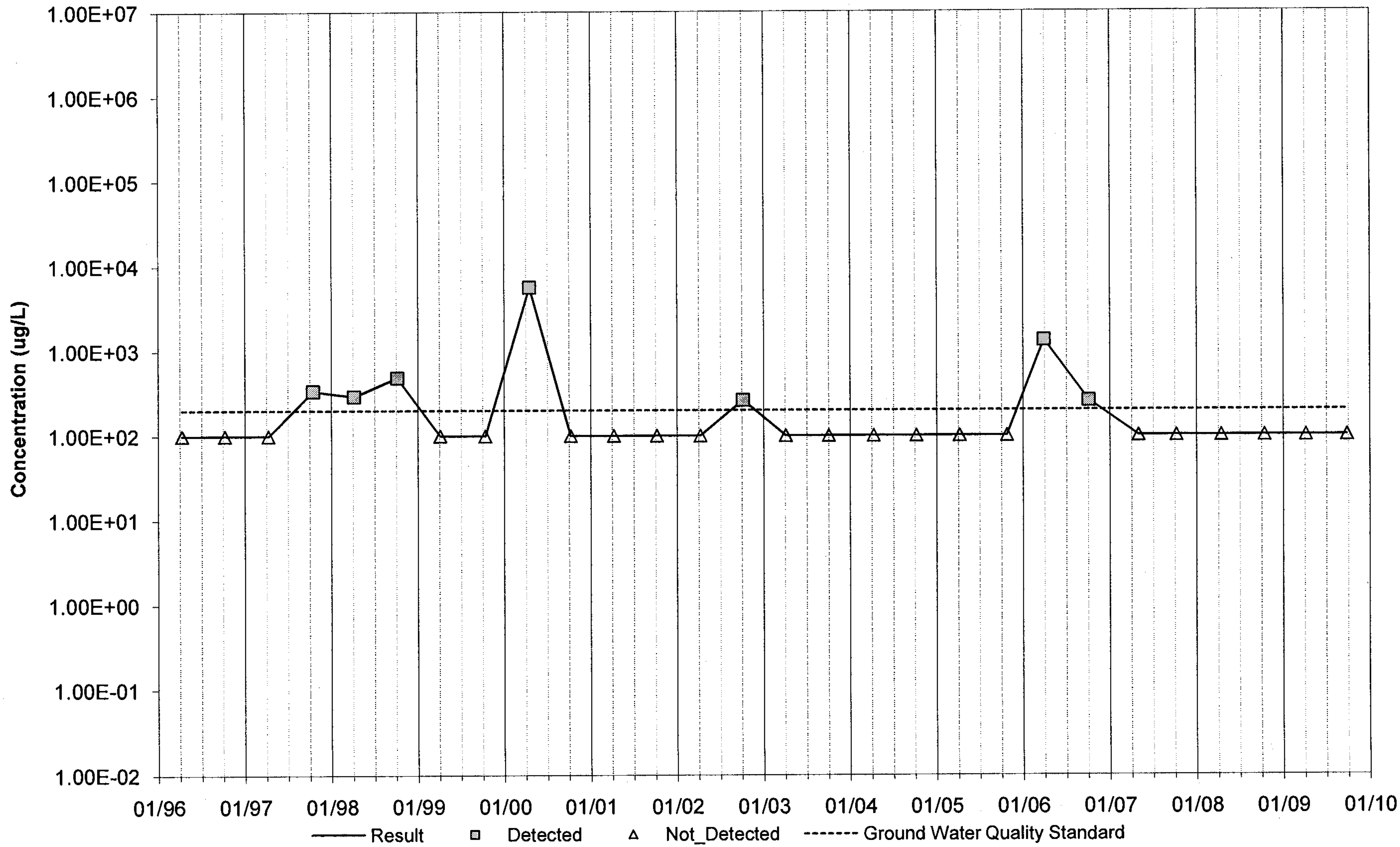
Monitoring Well: EEE-R
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations

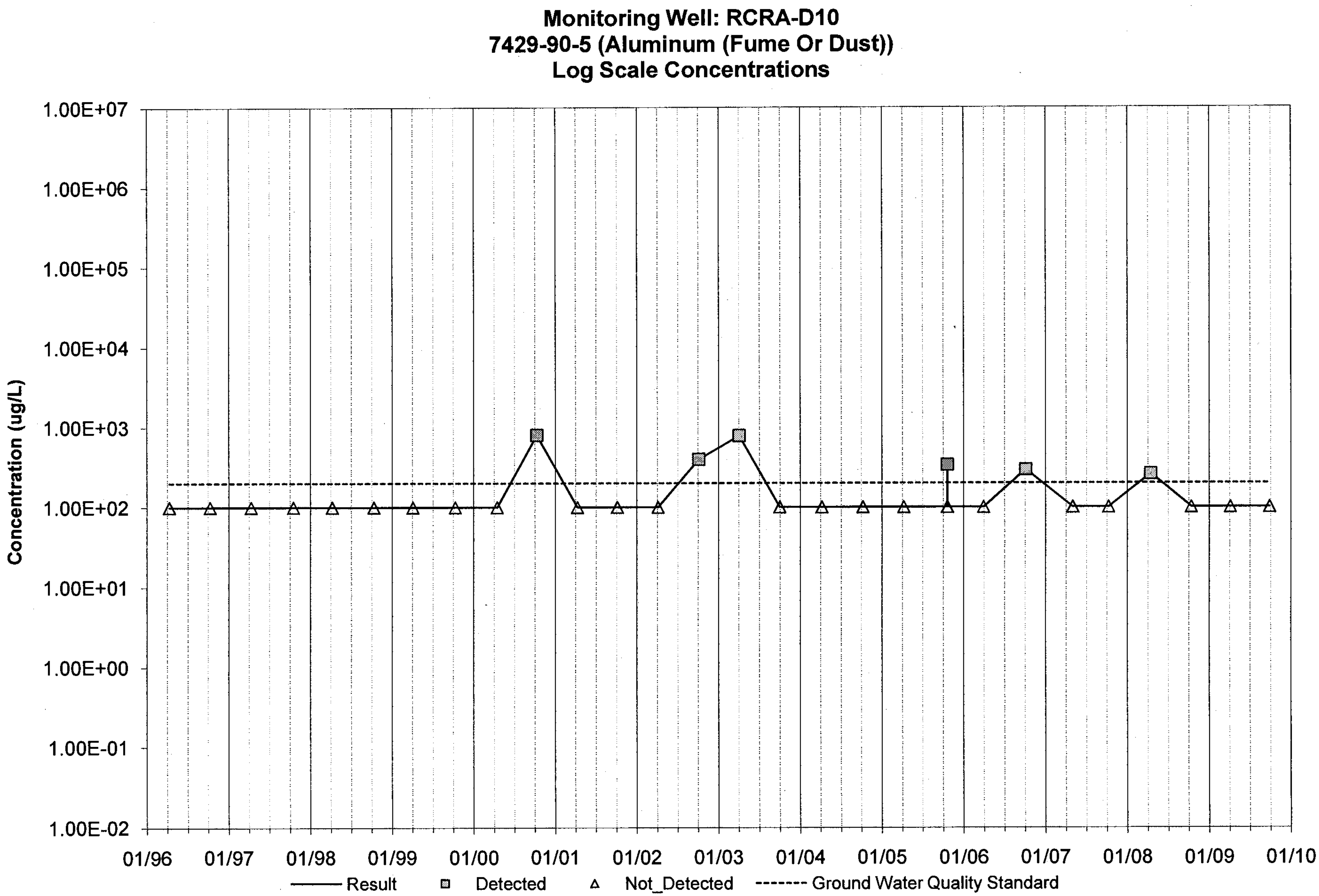


Monitoring Well: III
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations

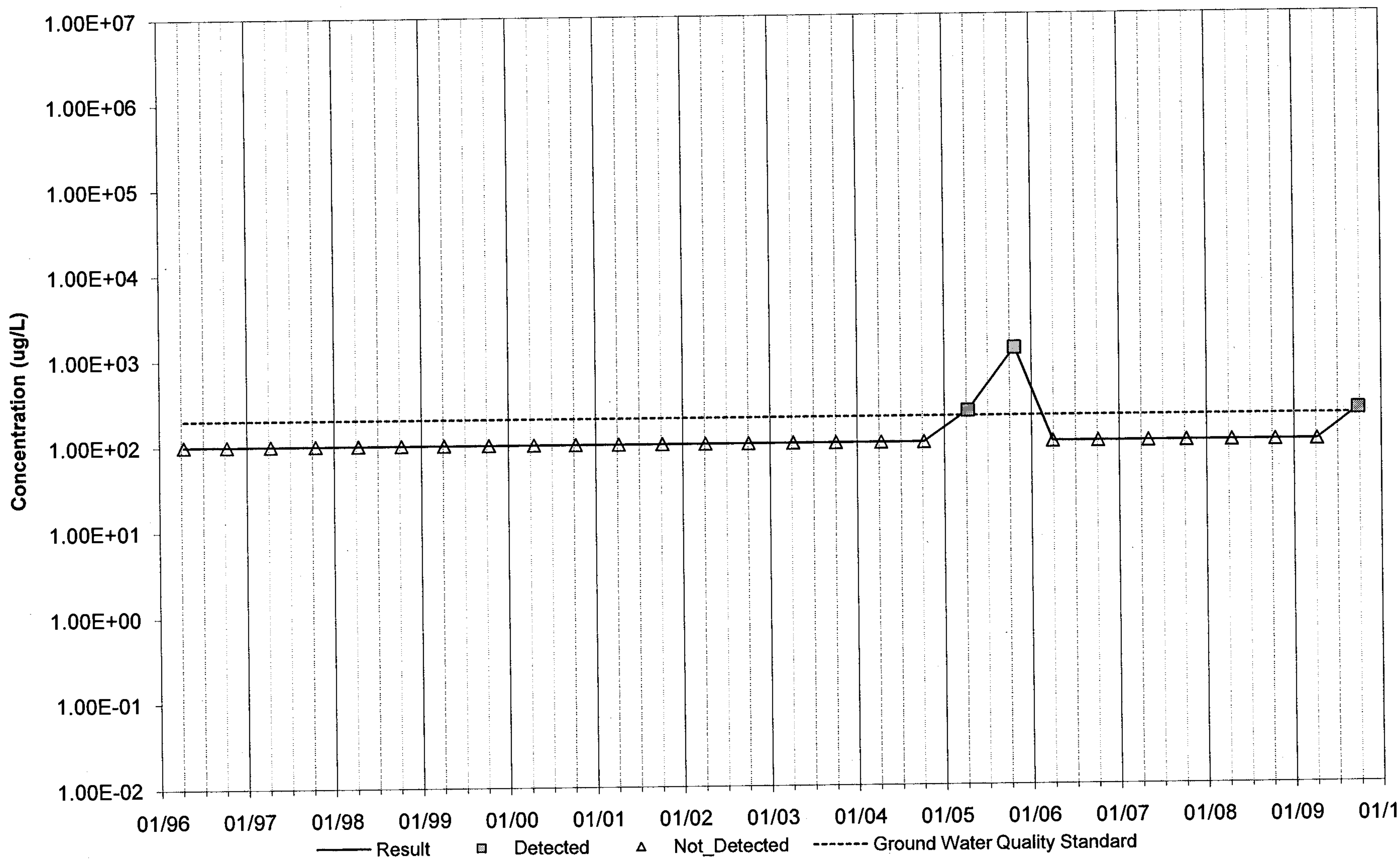


Monitoring Well: RCRA-D1
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations

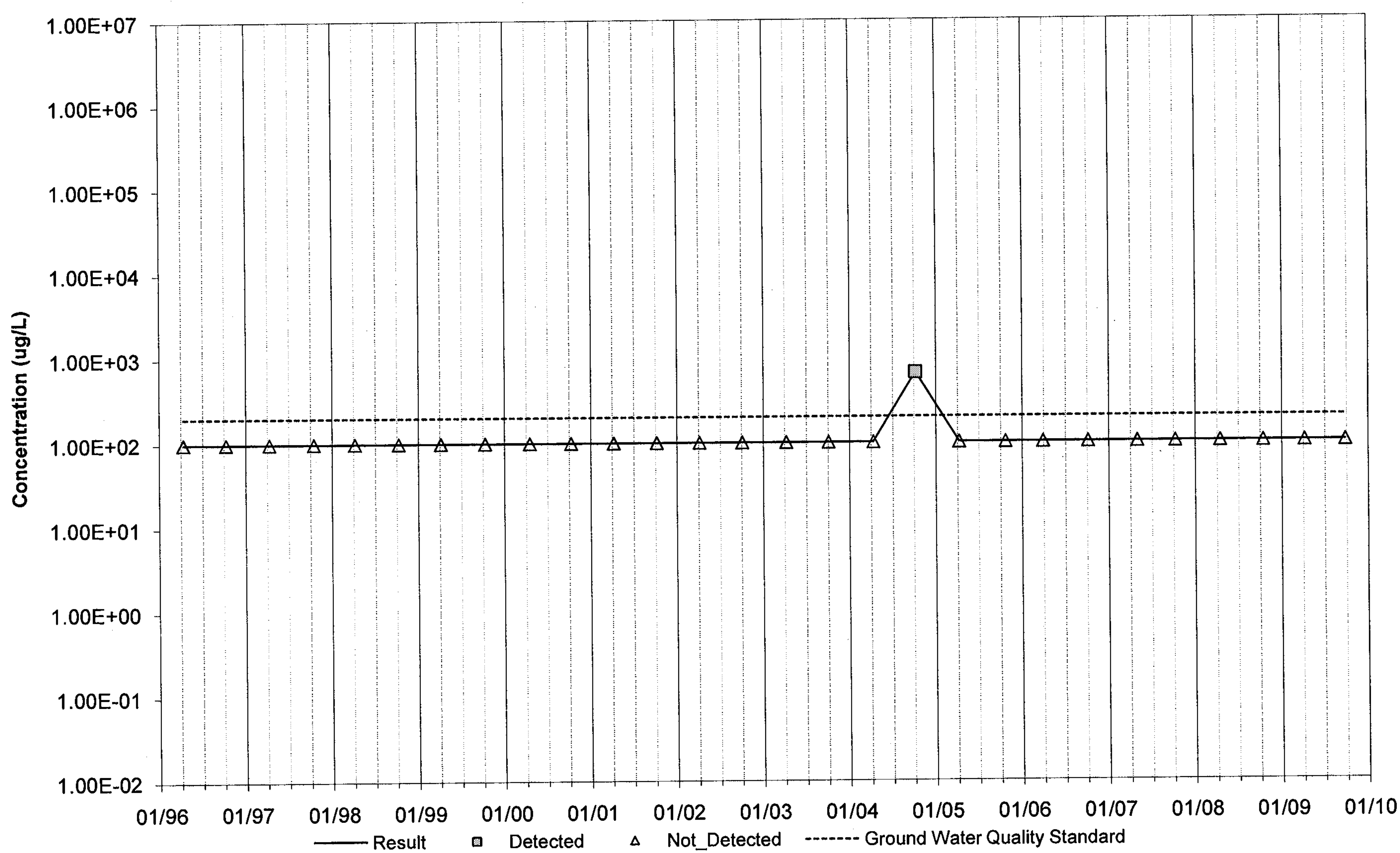



Monitoring Well: RCRA-D10
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

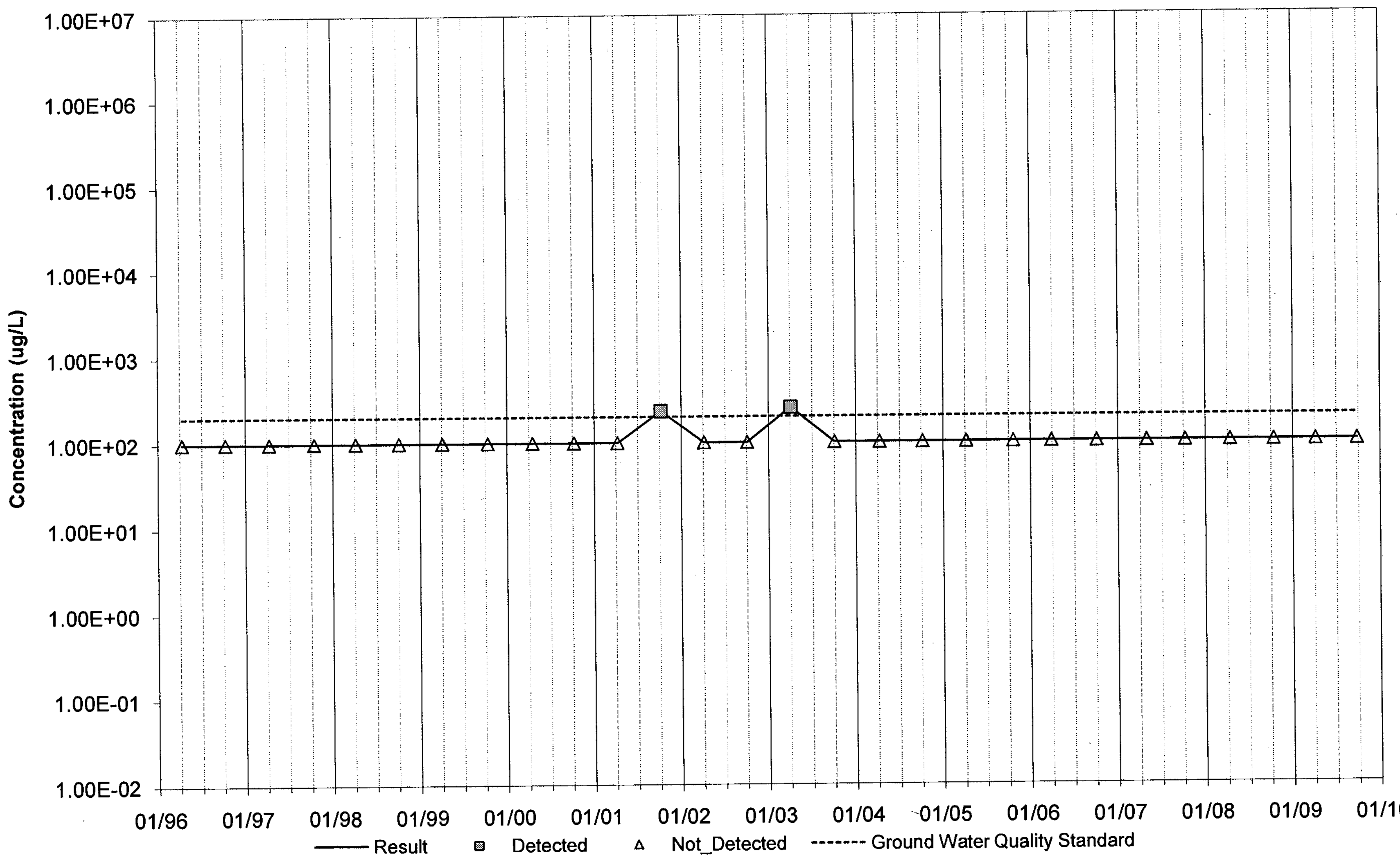
Monitoring Well: RCRA-D12
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



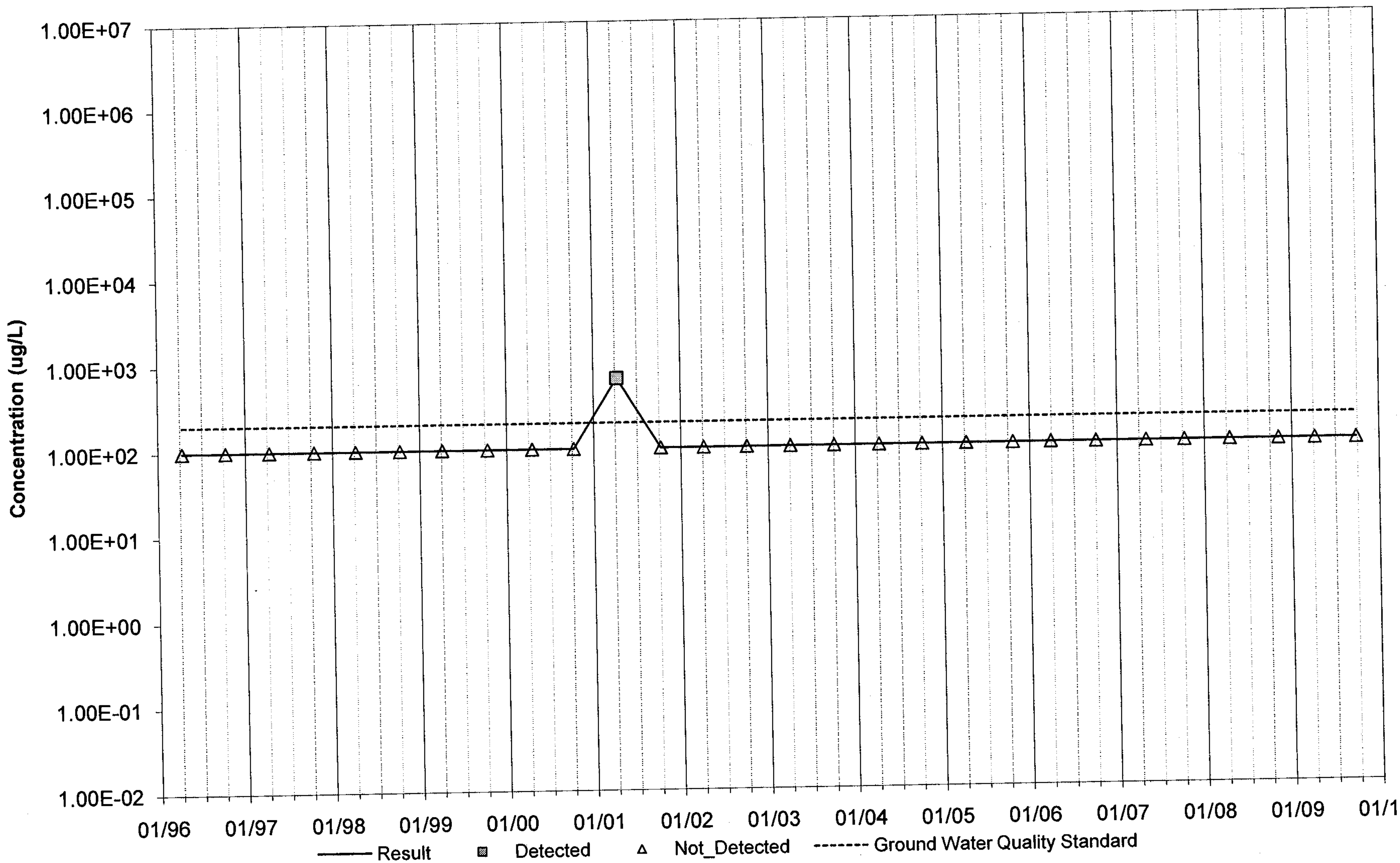
Monitoring Well: RCRA-D13
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



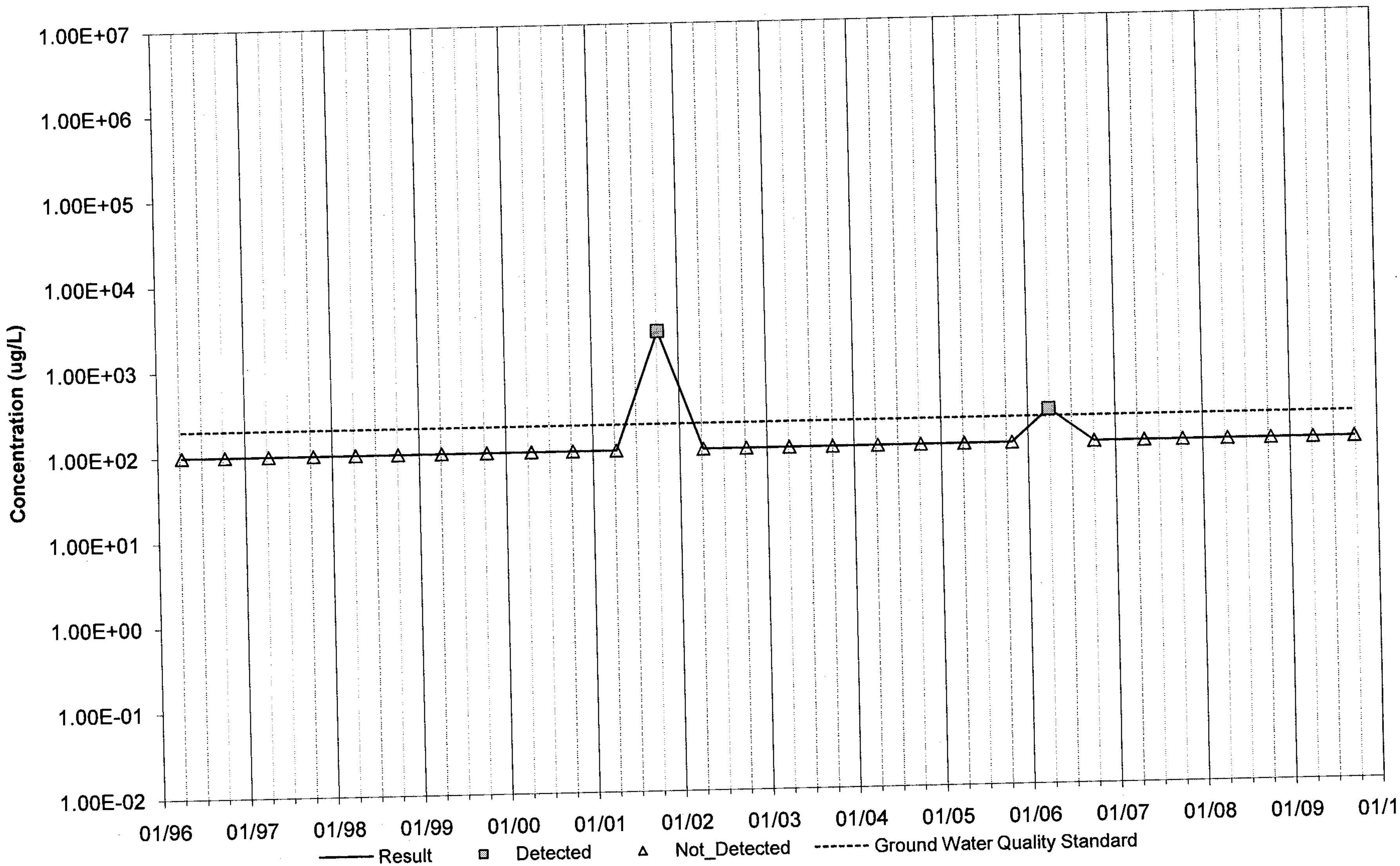
Monitoring Well: RCRA-D14
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations

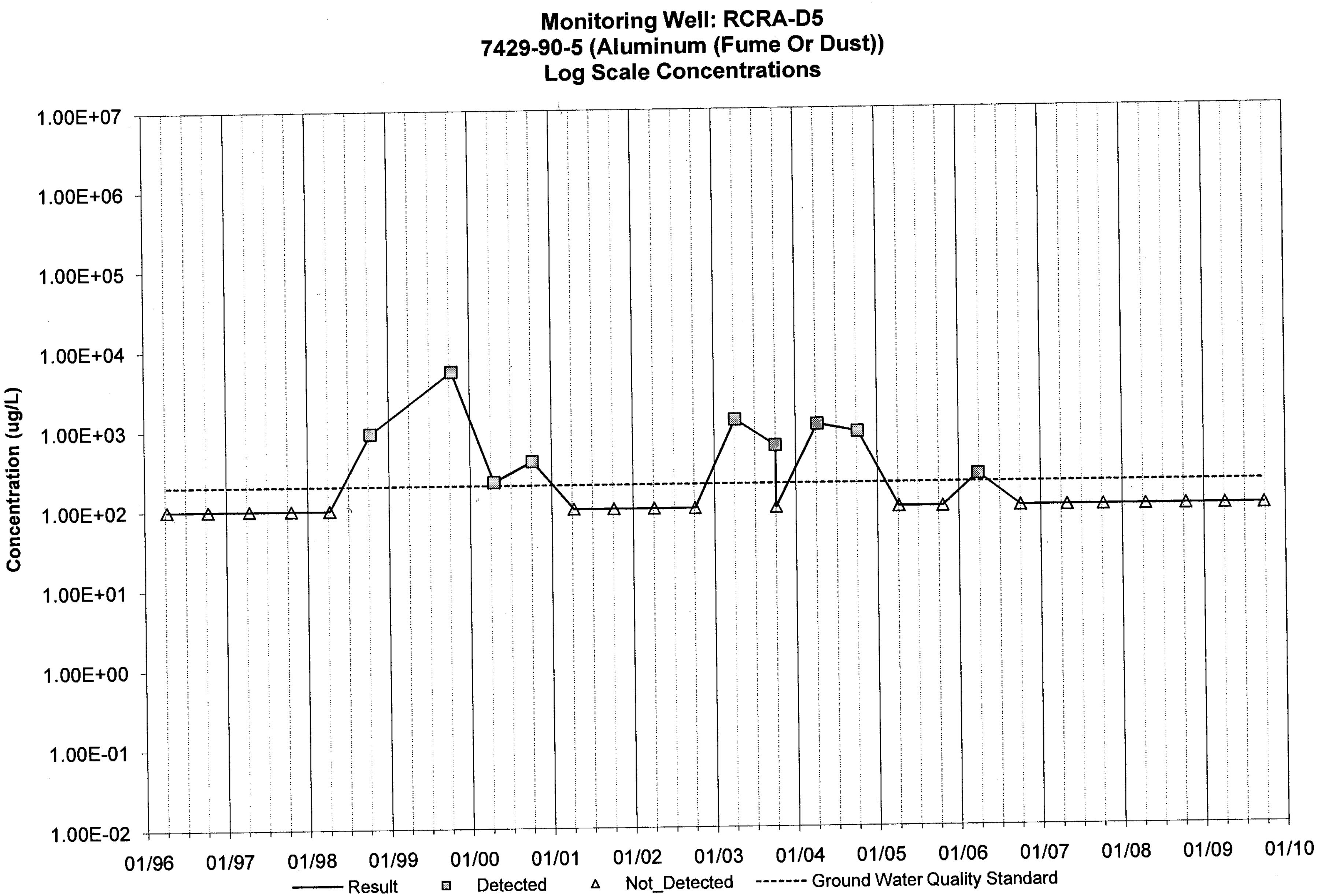


Monitoring Well: RCRA-D15
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations

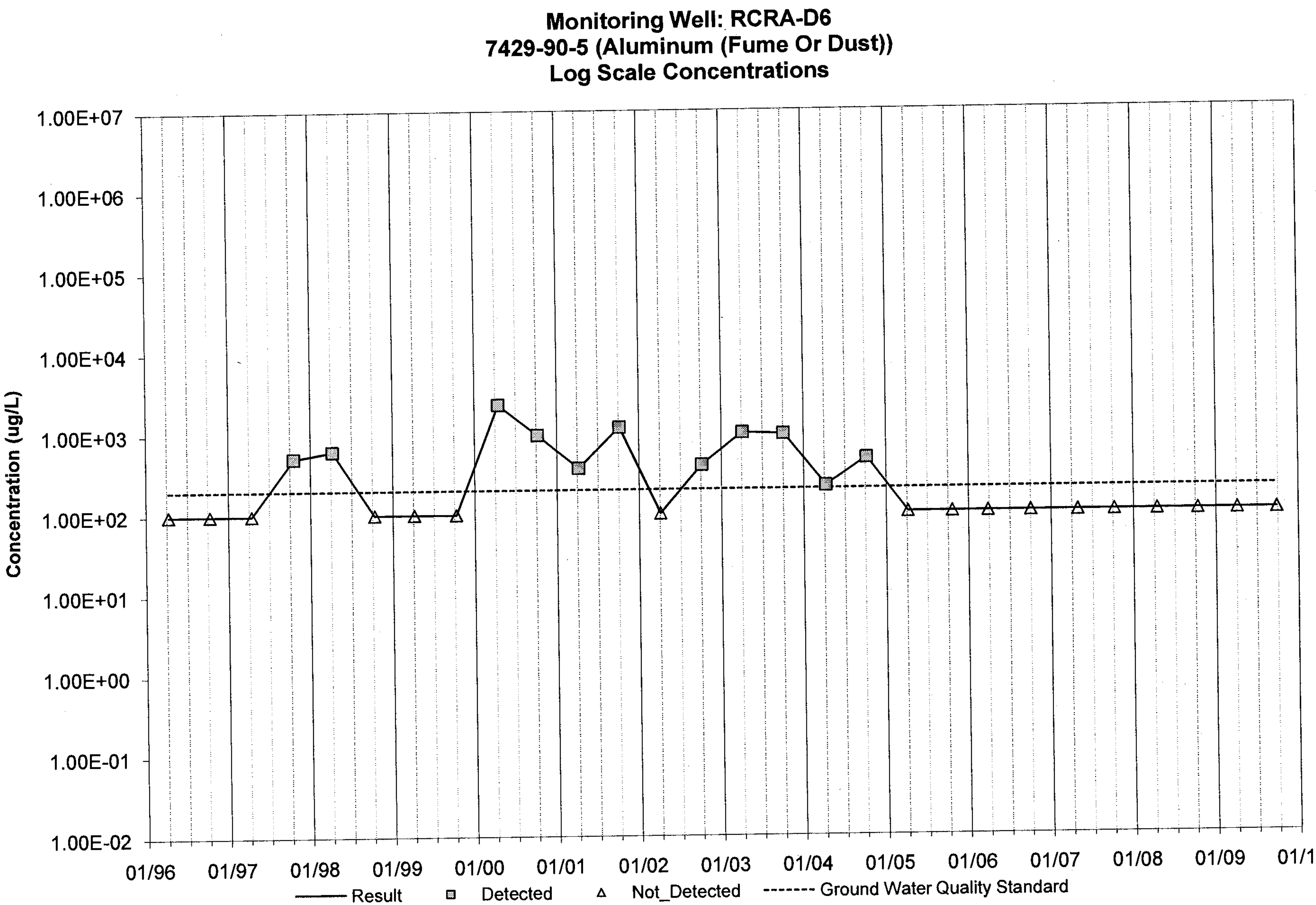


Monitoring Well: RCRA-D2
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



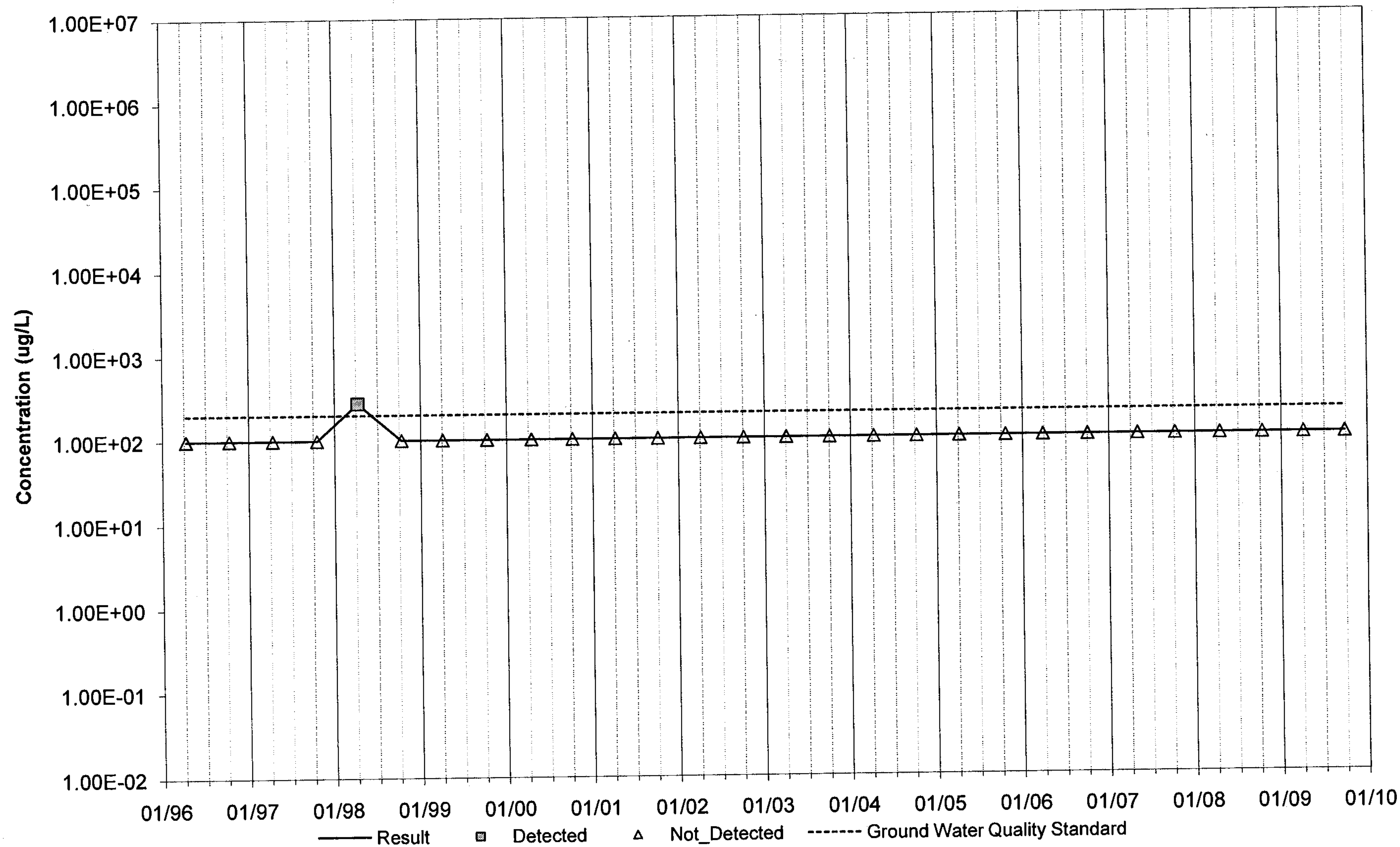


Monitoring Well: RCRA-D5
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

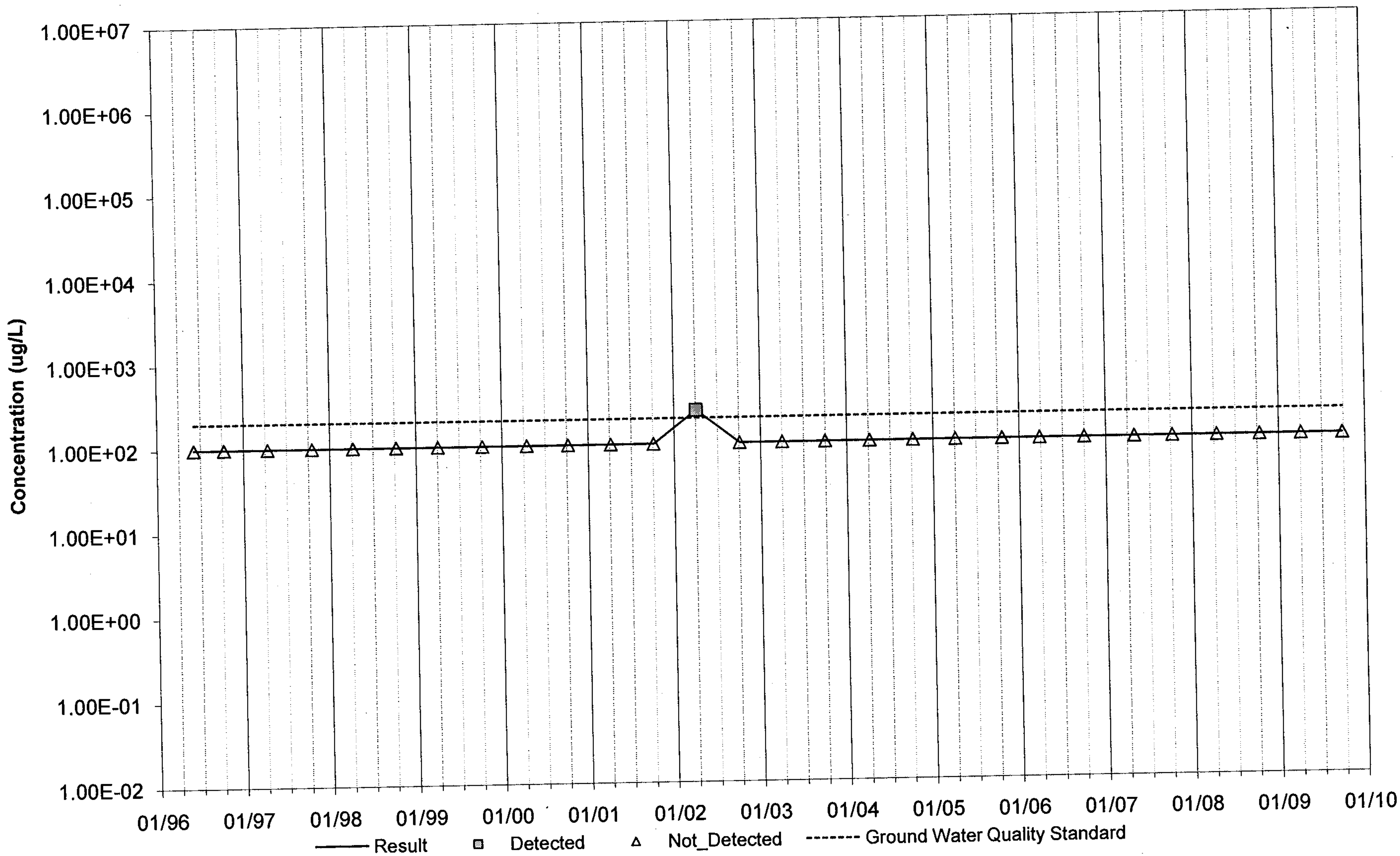


Monitoring Well: RCRA-D6
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

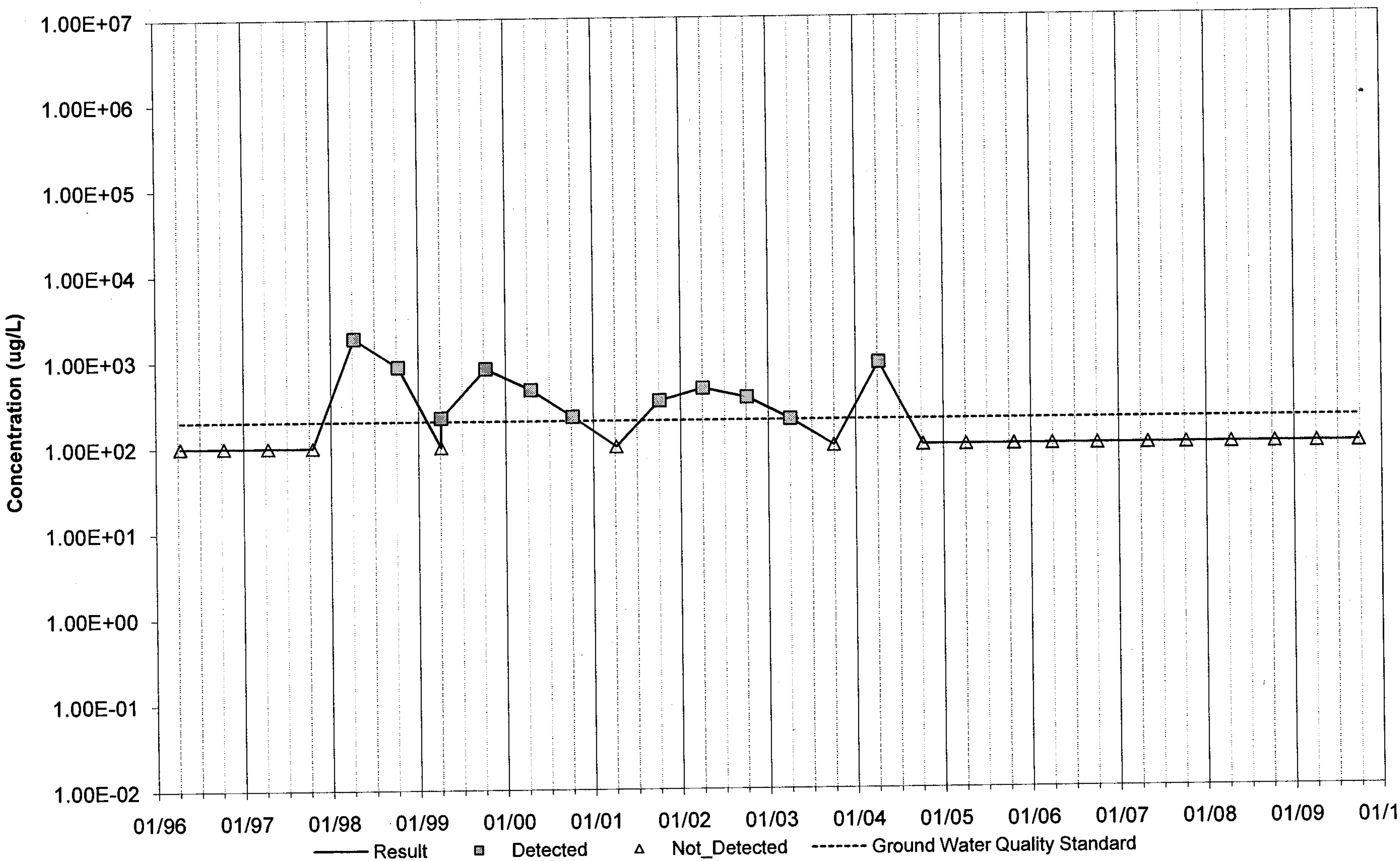
Monitoring Well: RCRA-D7
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



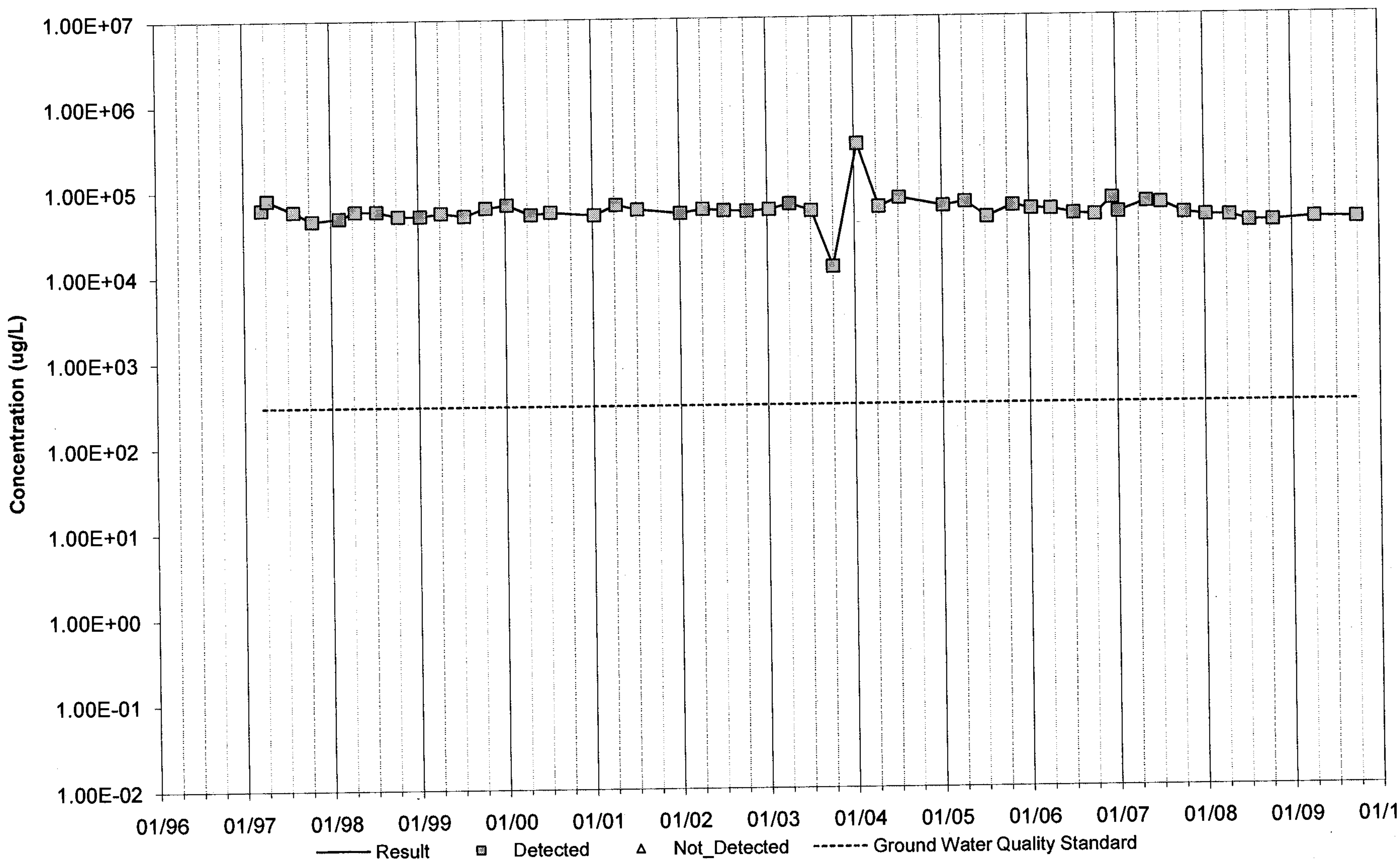
Monitoring Well: RCRA-D8
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



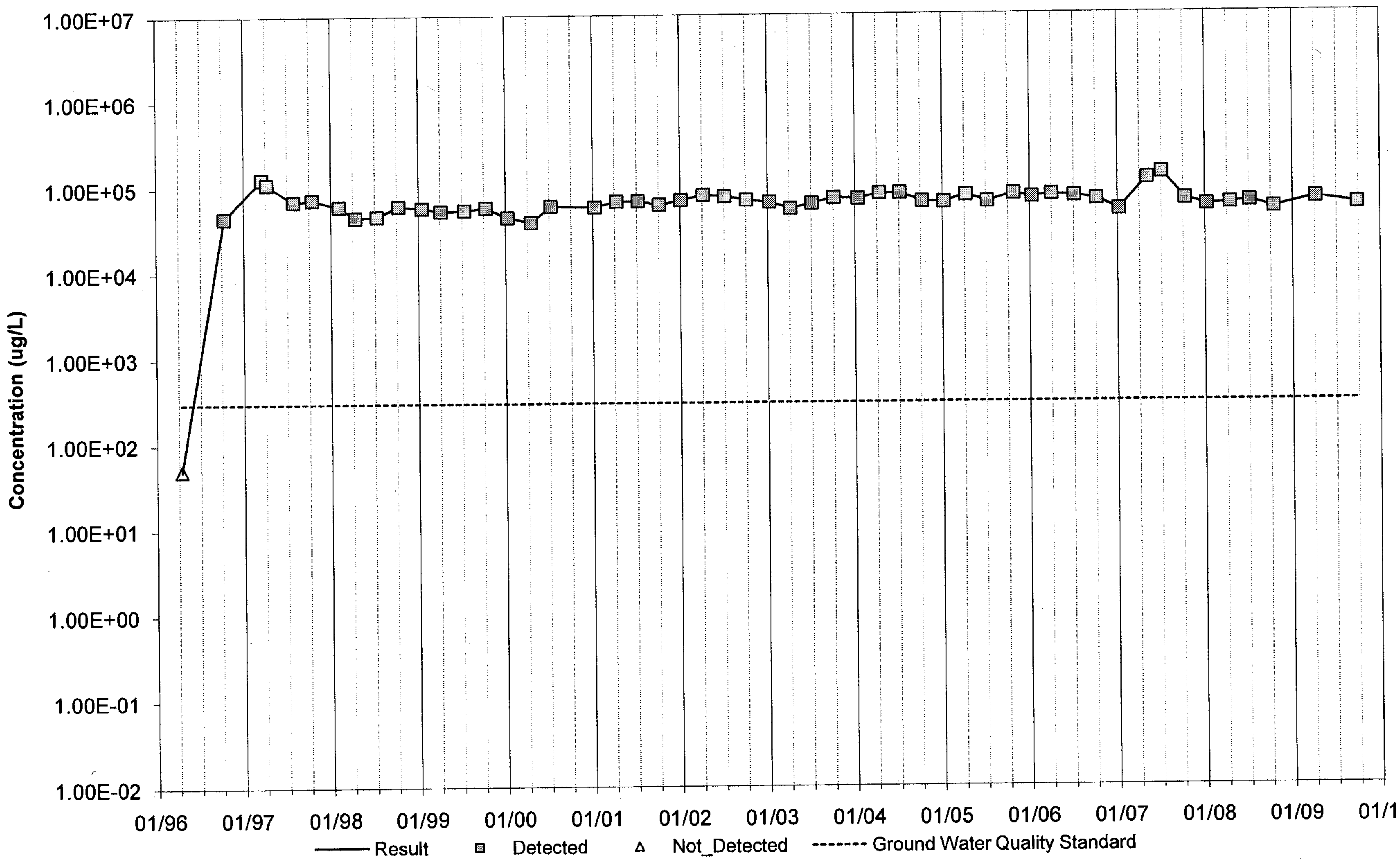
Monitoring Well: RCRA-D9
7429-90-5 (Aluminum (Fume Or Dust))
Log Scale Concentrations



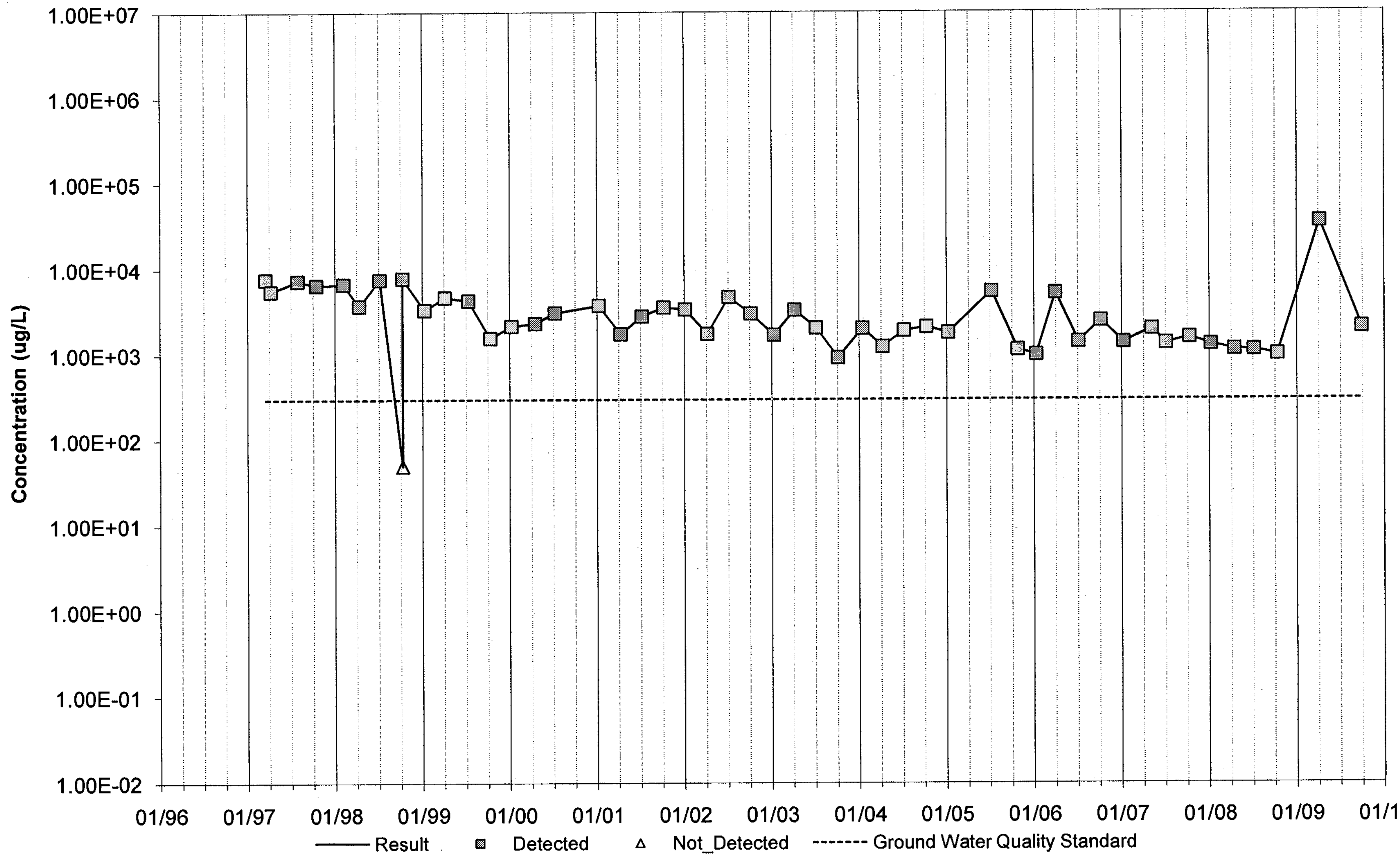
Monitoring Well: 16-MW-2
7439-89-6 (Iron)
Log Scale Concentrations



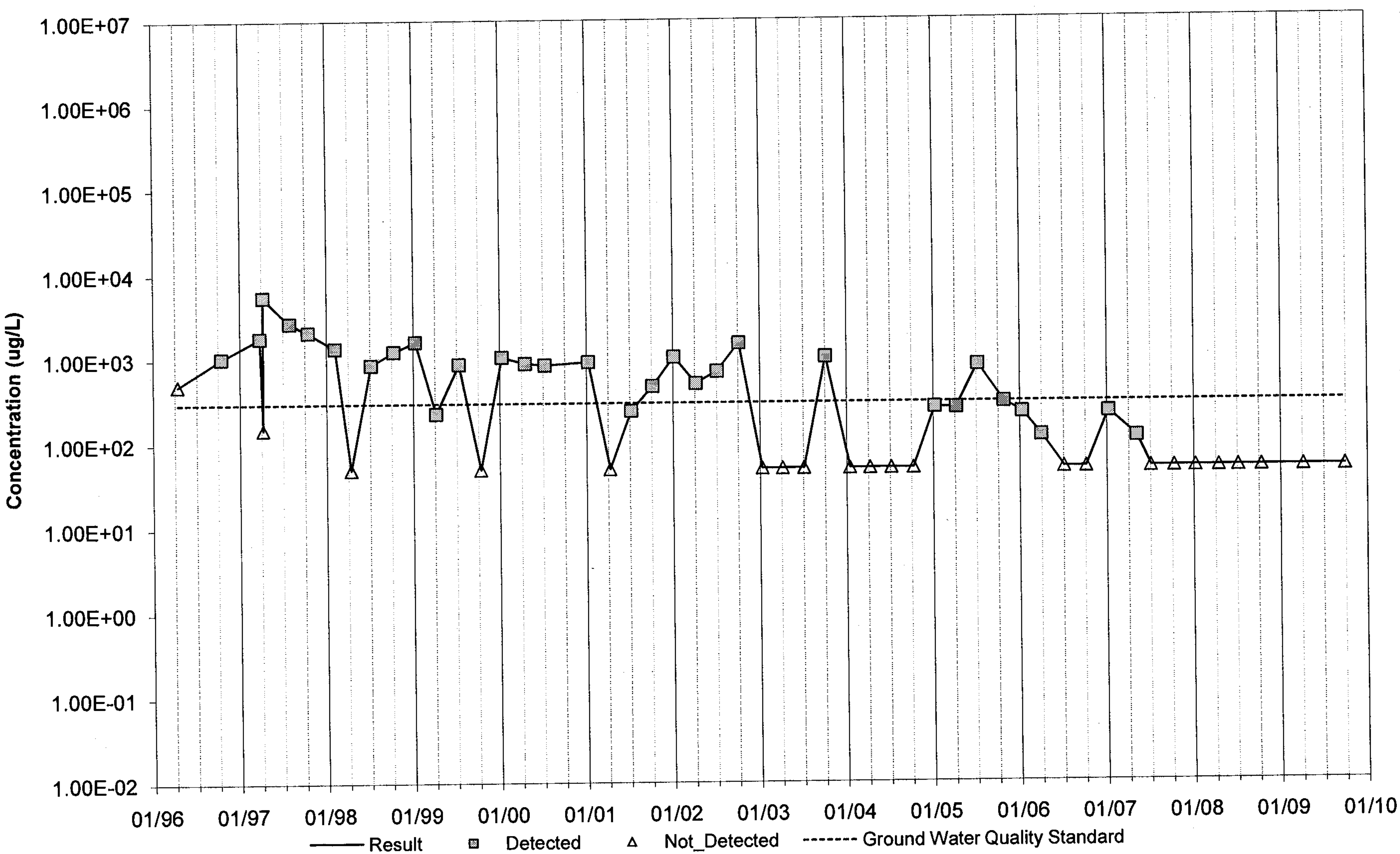
Monitoring Well: AAA
7439-89-6 (Iron)
Log Scale Concentrations



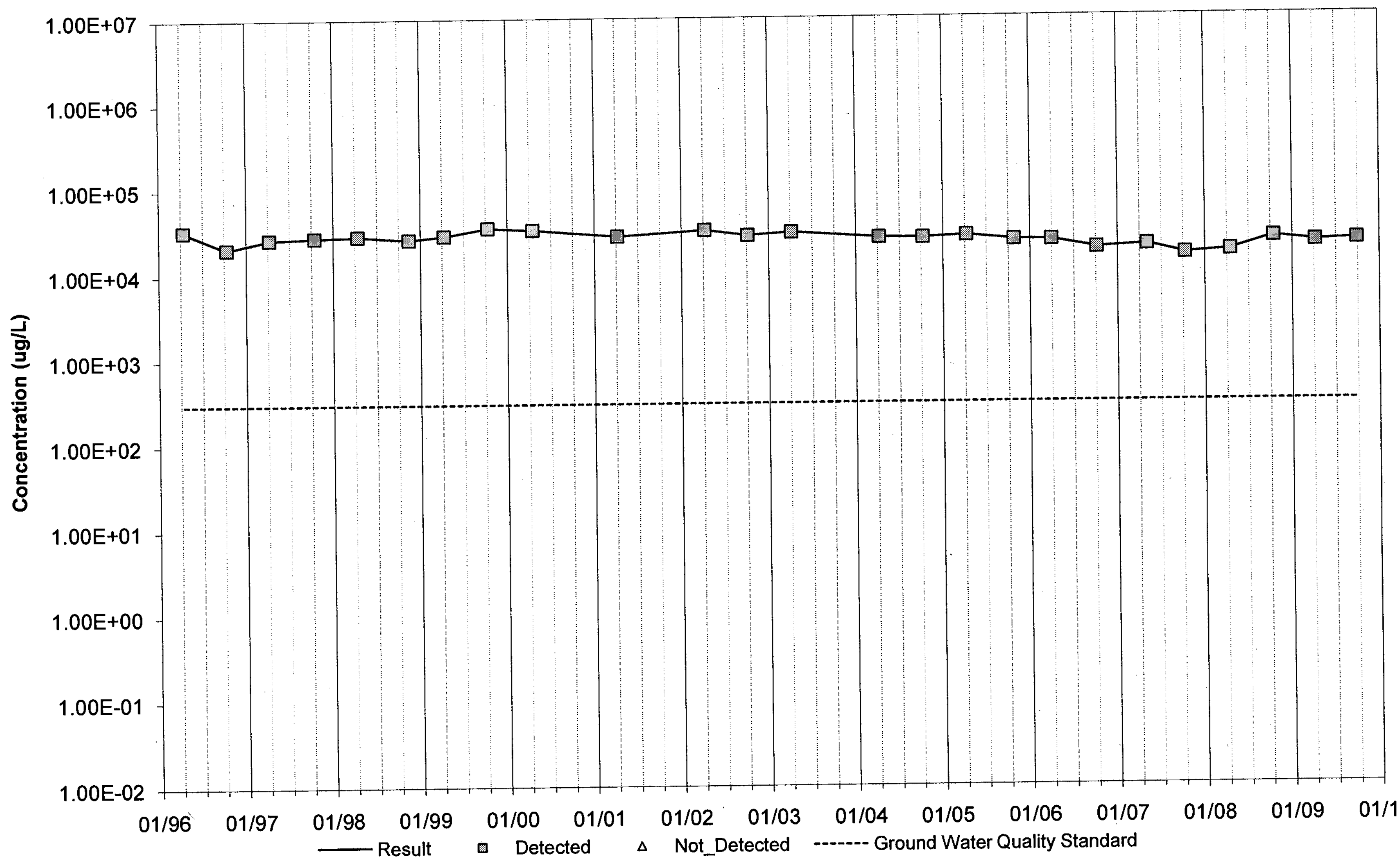
Monitoring Well: CCC-R
7439-89-6 (Iron)
Log Scale Concentrations

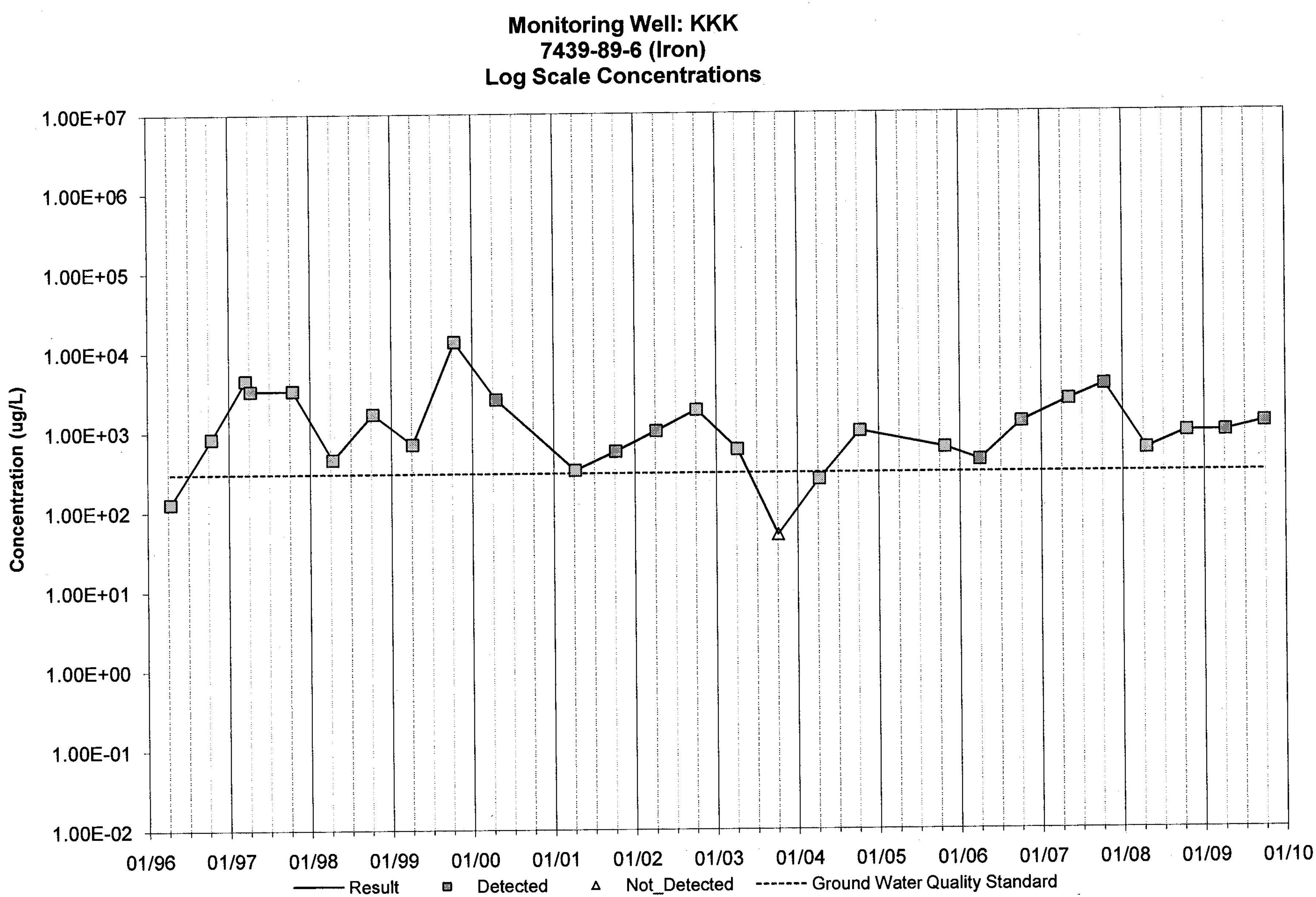


Monitoring Well: EEE-R
7439-89-6 (Iron)
Log Scale Concentrations

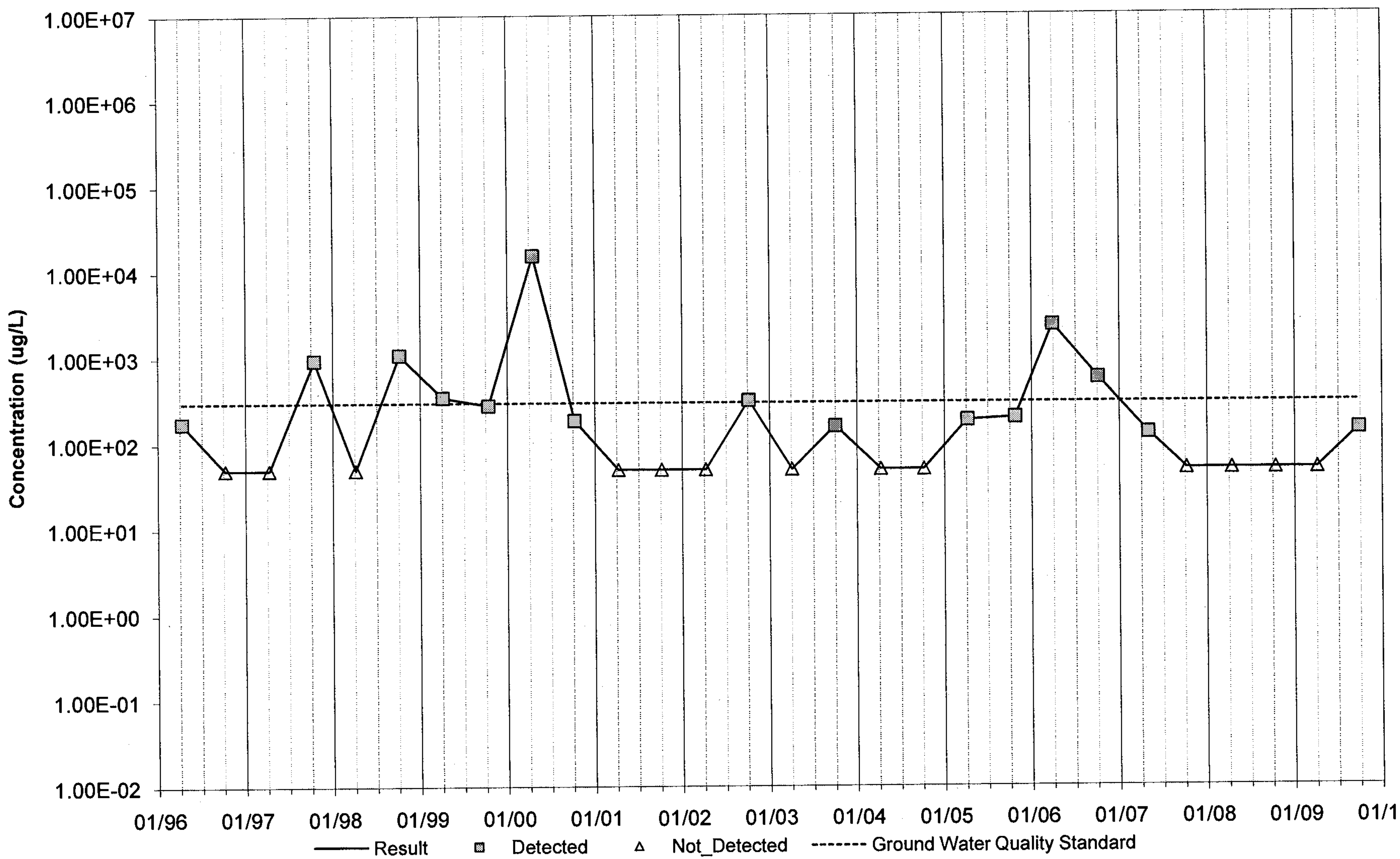


Monitoring Well: III
7439-89-6 (Iron)
Log Scale Concentrations

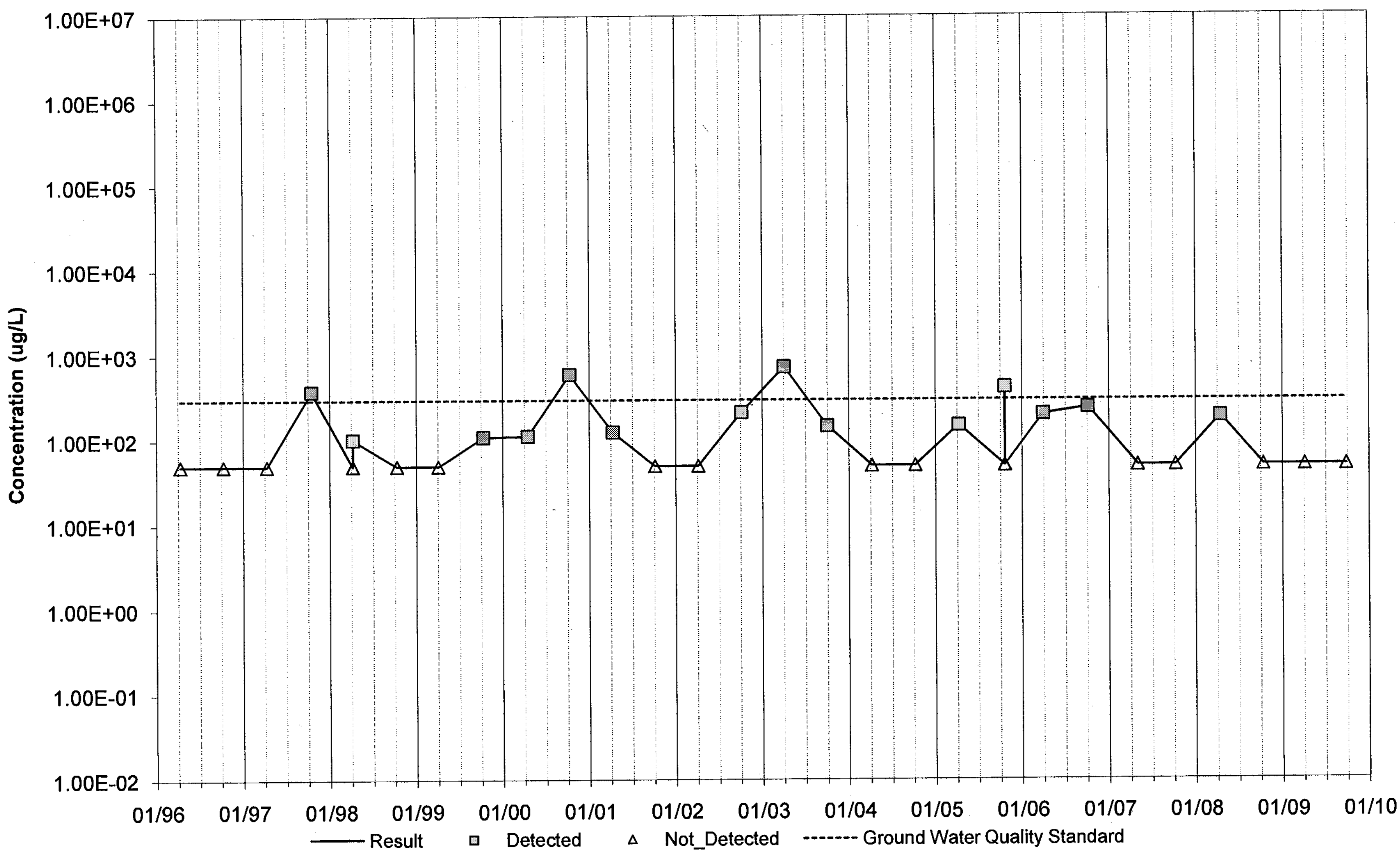



Monitoring Well: KKK
7439-89-6 (Iron)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

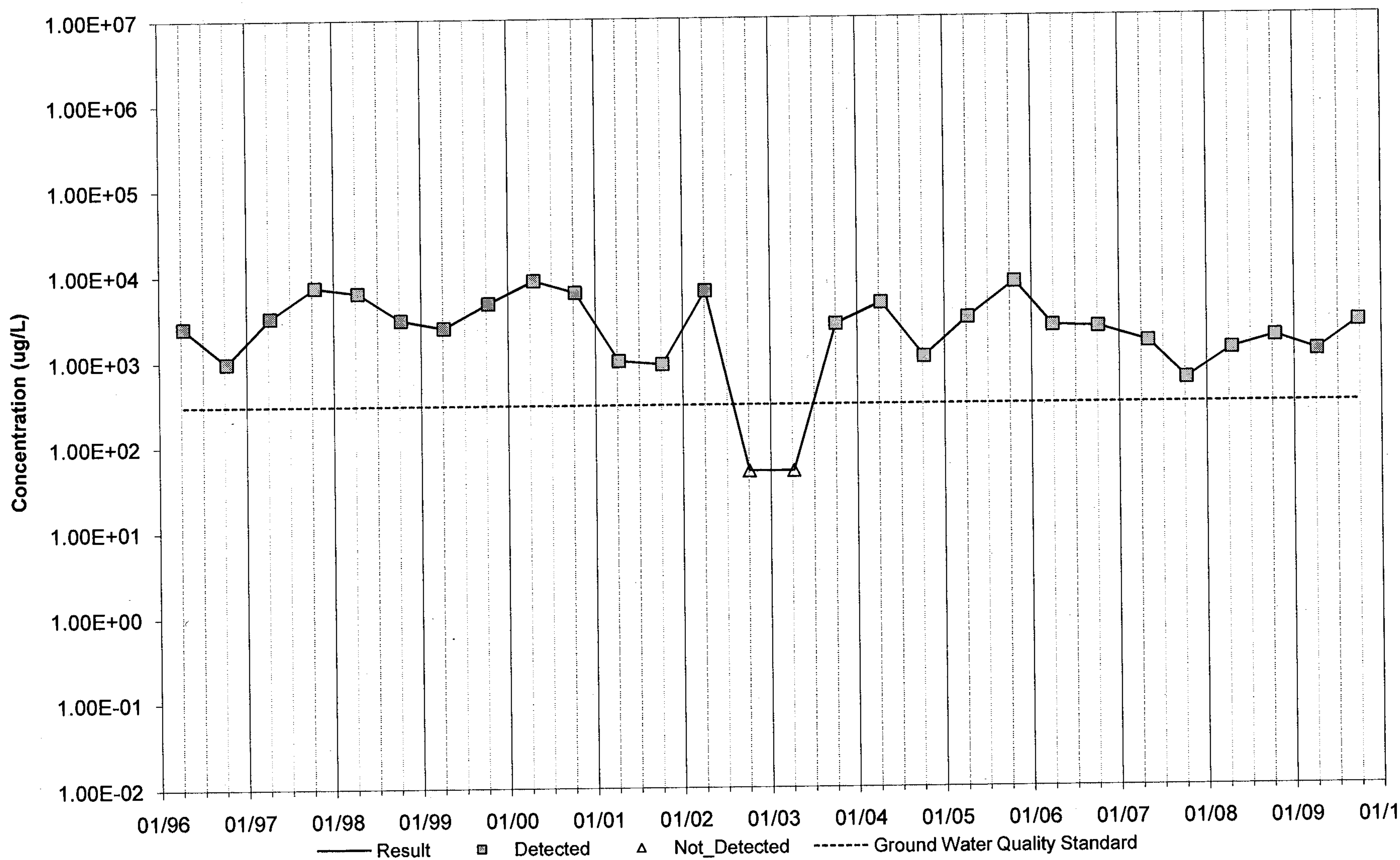
Monitoring Well: RCRA-D1
7439-89-6 (Iron)
Log Scale Concentrations

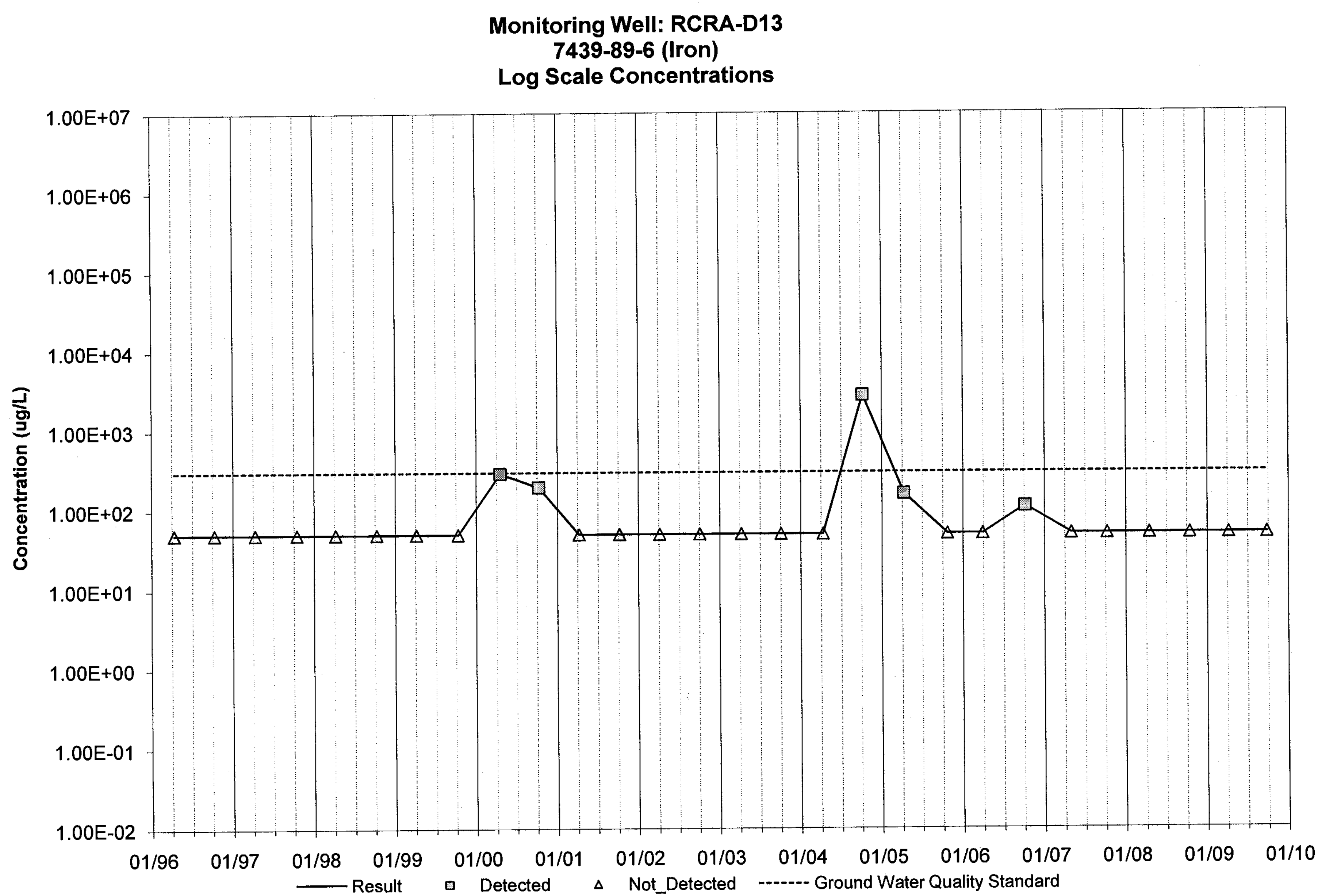


Monitoring Well: RCRA-D10
7439-89-6 (Iron)
Log Scale Concentrations

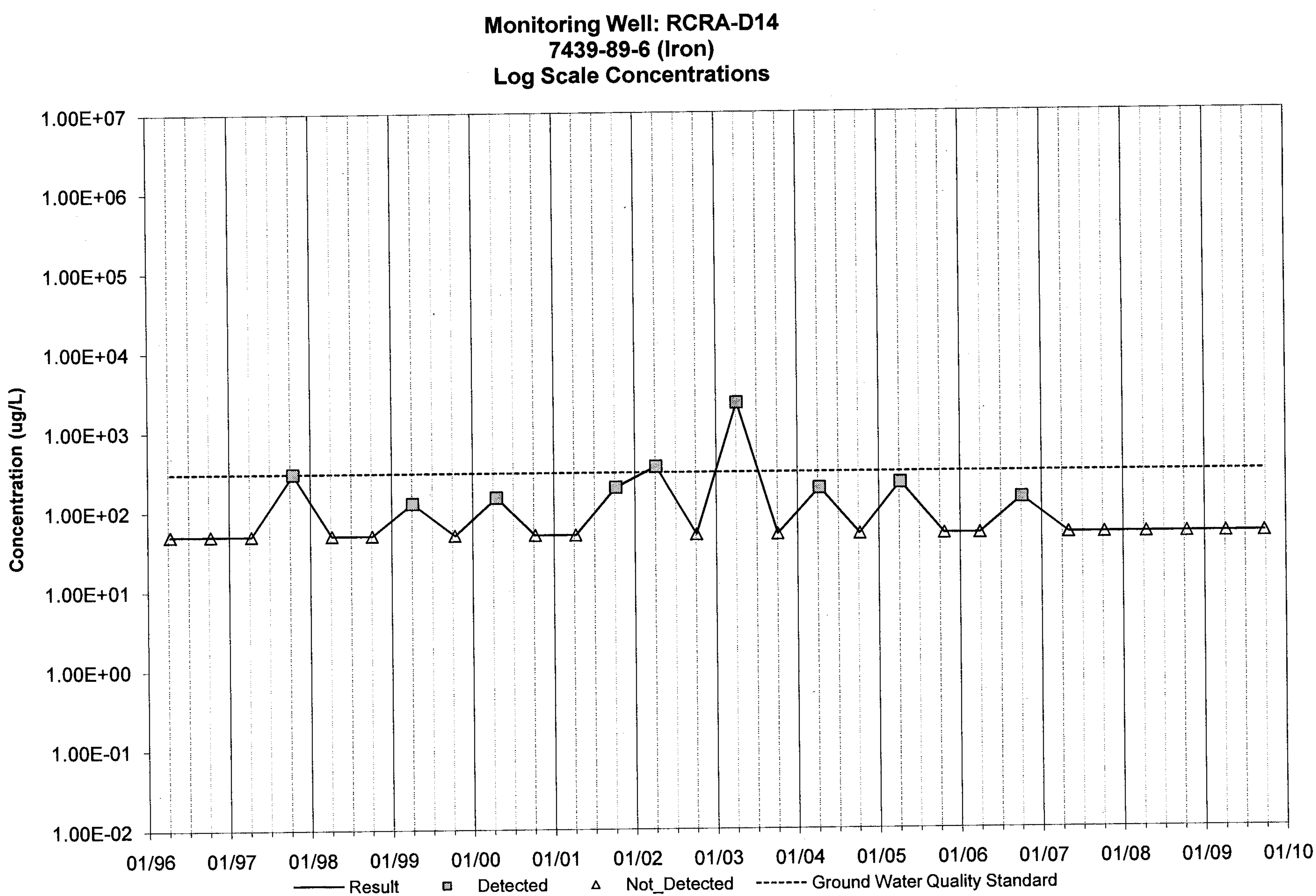


Monitoring Well: RCRA-D12
7439-89-6 (Iron)
Log Scale Concentrations



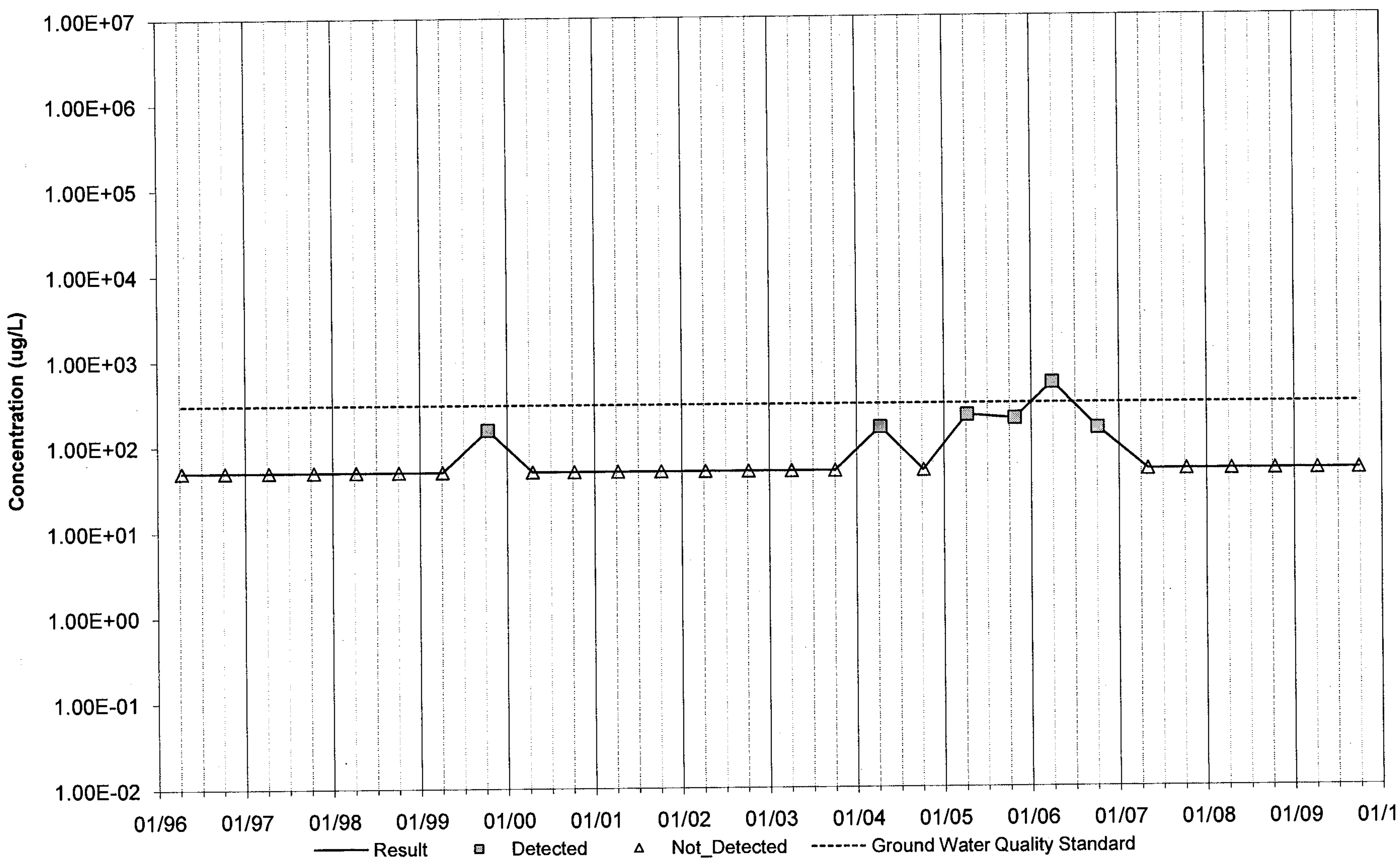


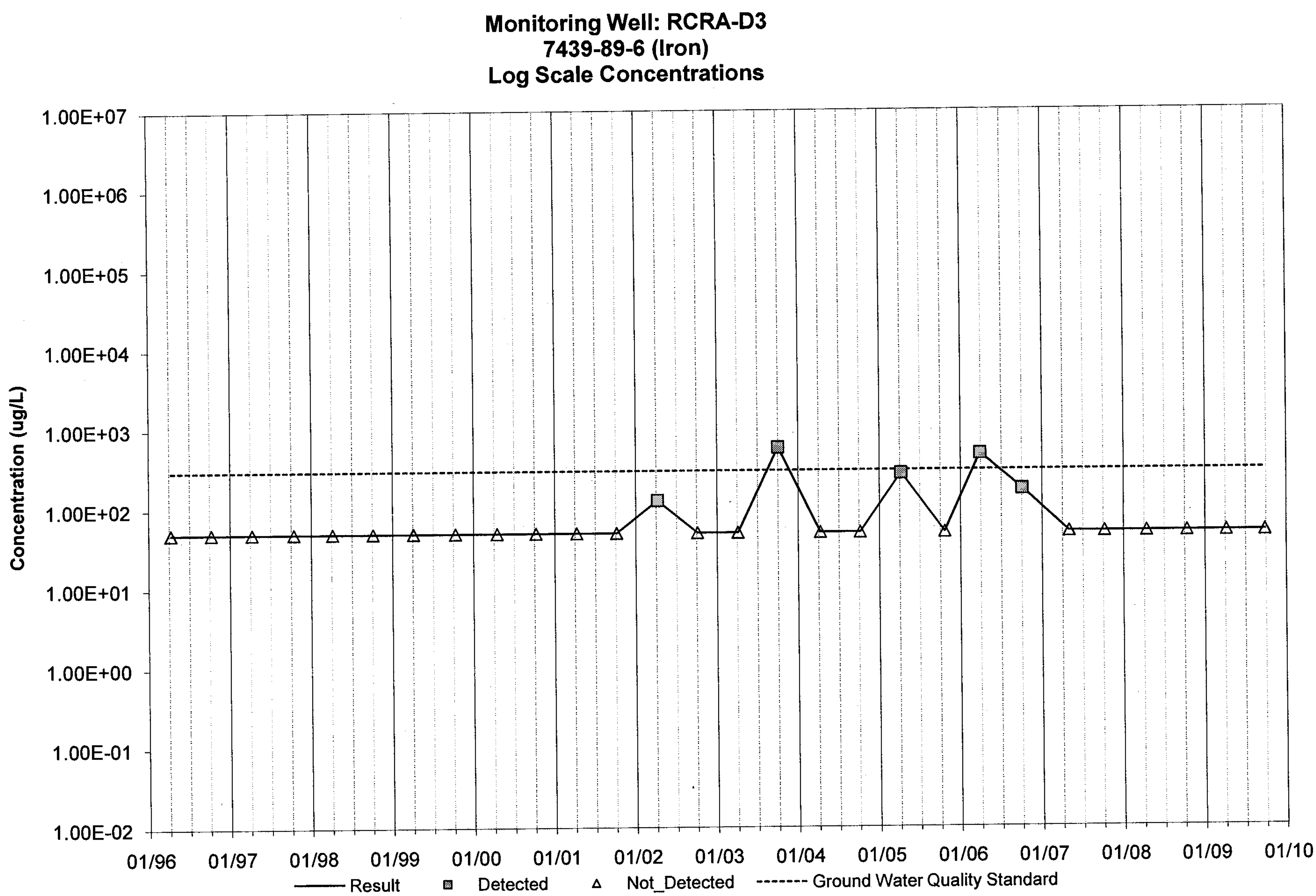
Monitoring Well: RCRA-D13
7439-89-6 (Iron)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



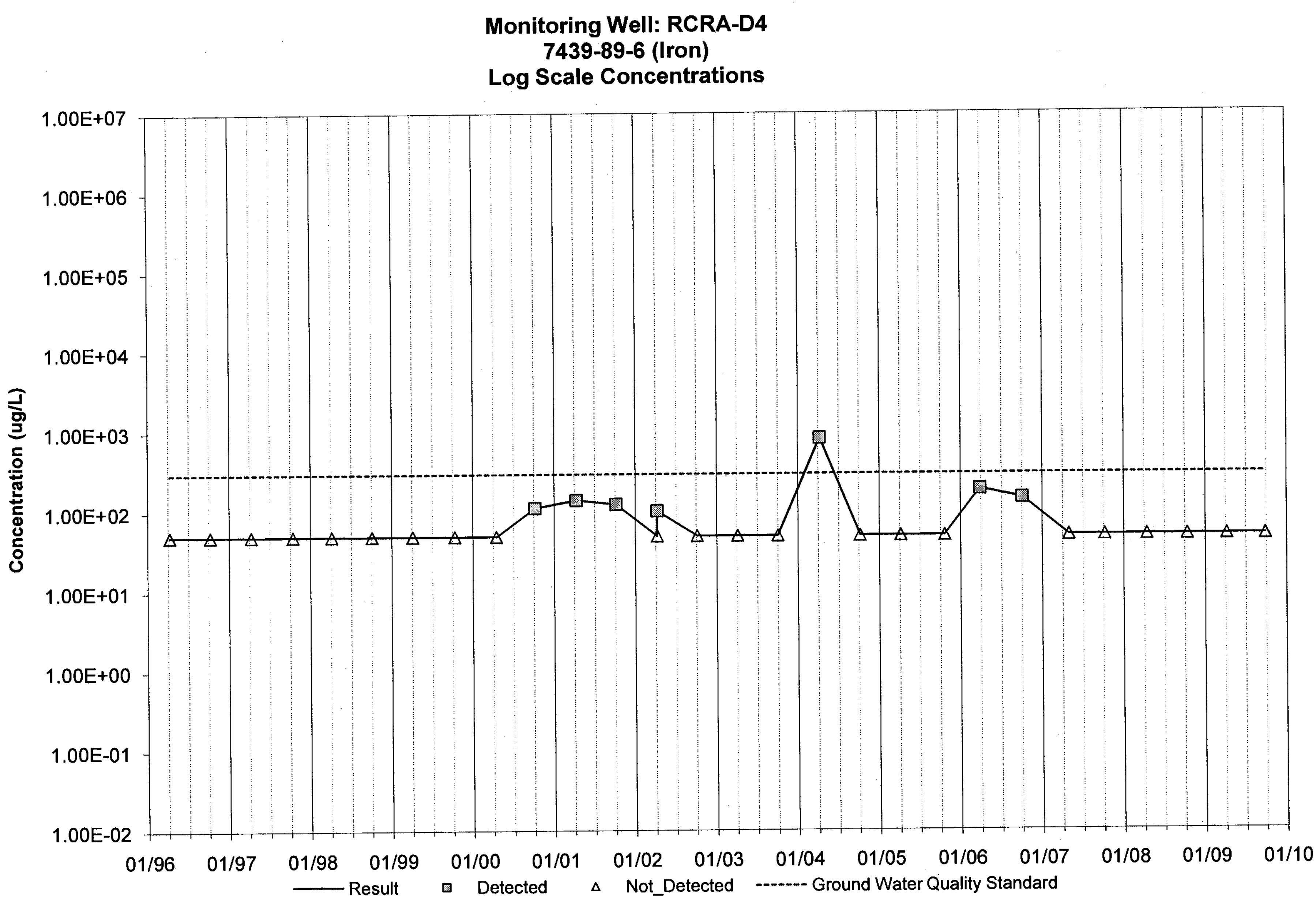
Monitoring Well: RCRA-D14
7439-89-6 (Iron)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D2
7439-89-6 (Iron)
Log Scale Concentrations



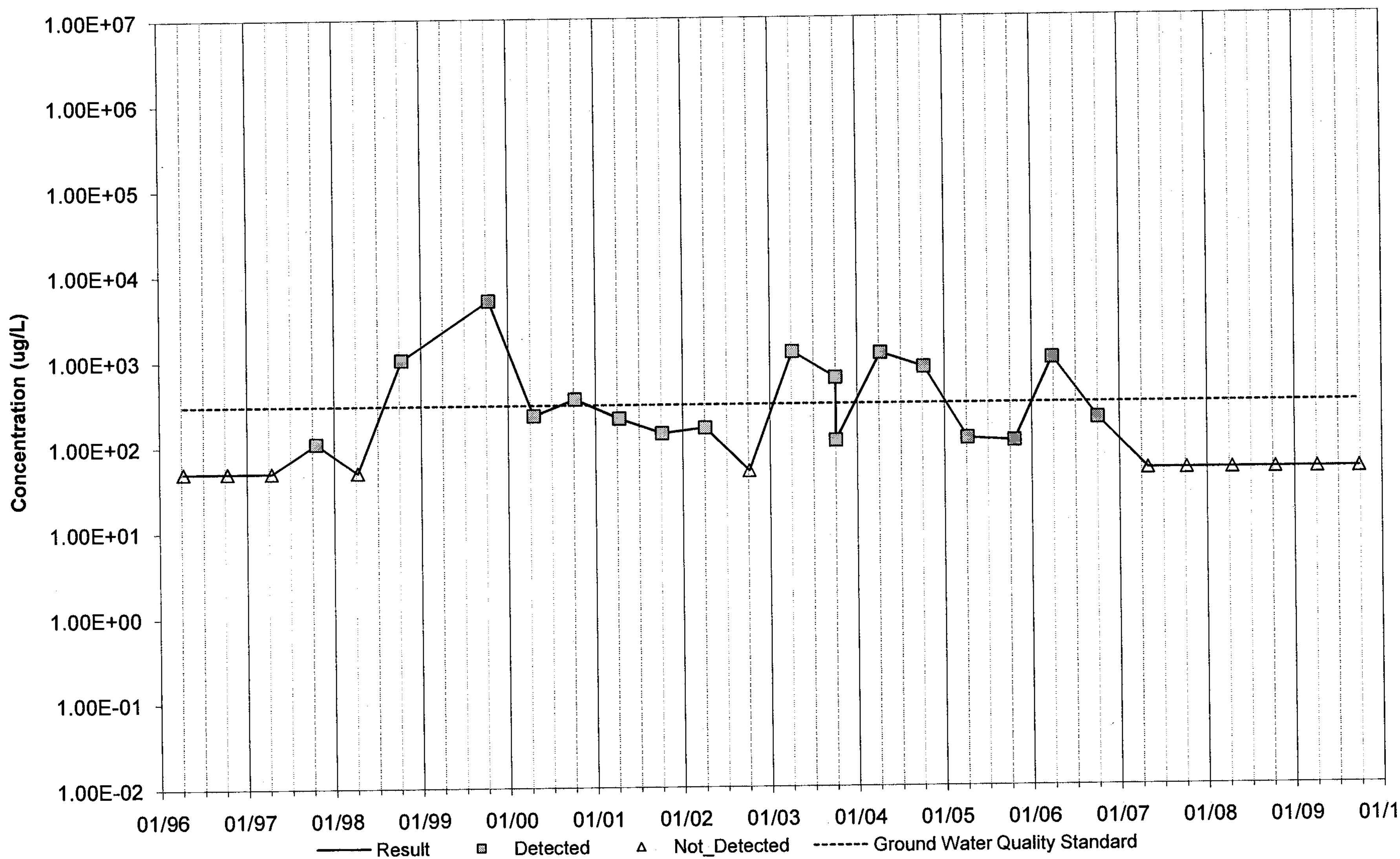


Monitoring Well: RCRA-D3
7439-89-6 (Iron)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

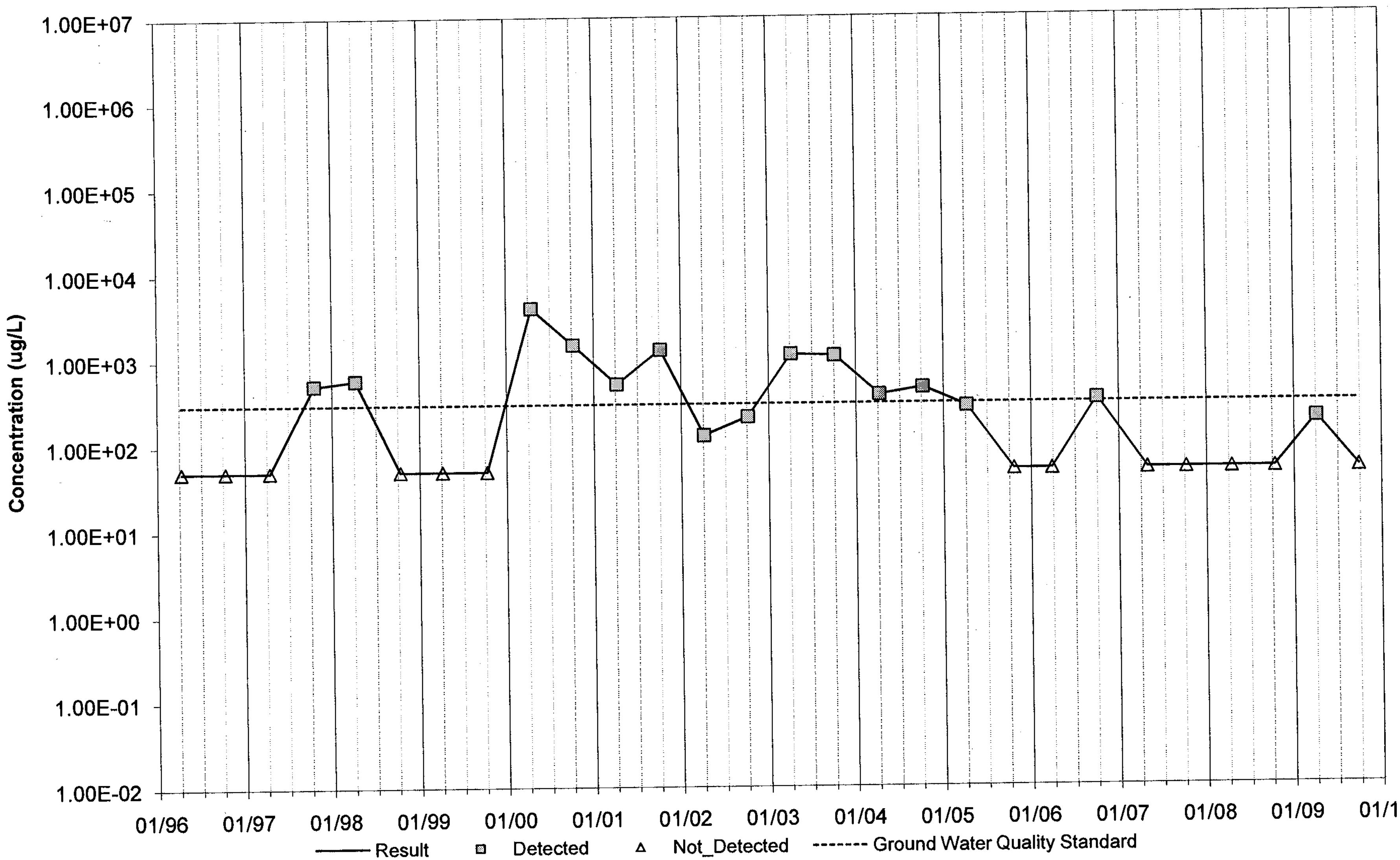


Monitoring Well: RCRA-D4
7439-89-6 (Iron)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

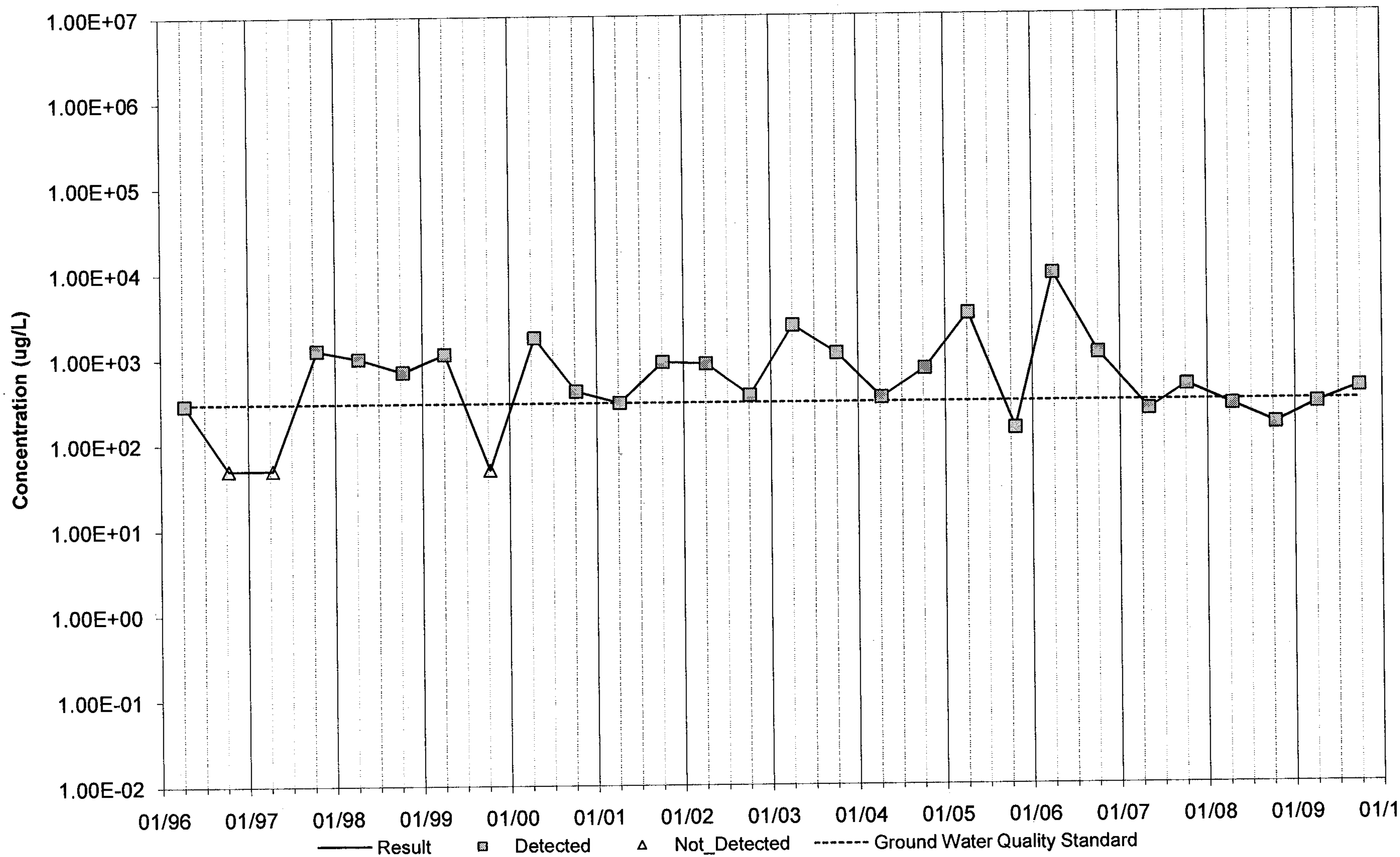
Monitoring Well: RCRA-D5
7439-89-6 (Iron)
Log Scale Concentrations



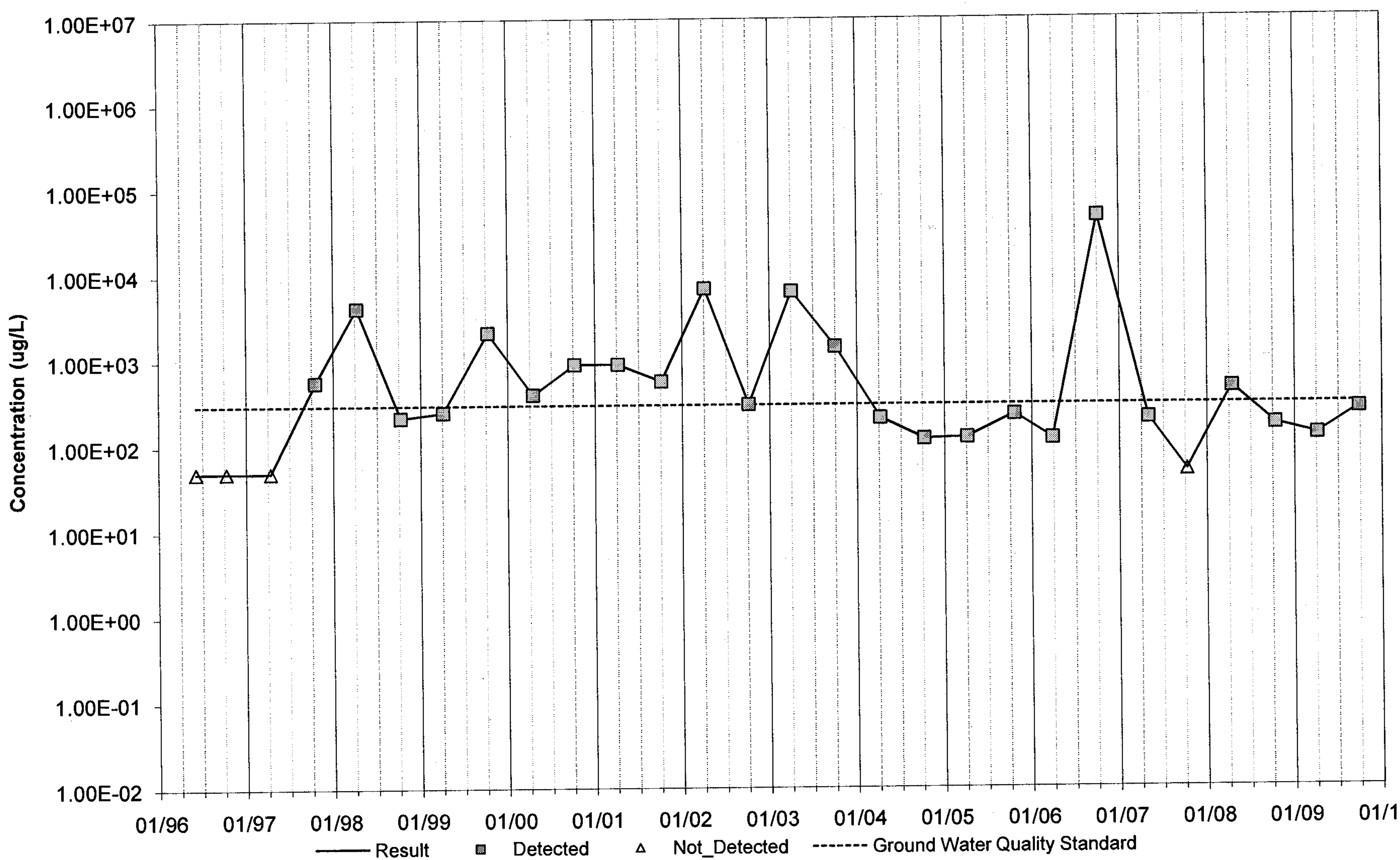
Monitoring Well: RCRA-D6
7439-89-6 (Iron)
Log Scale Concentrations



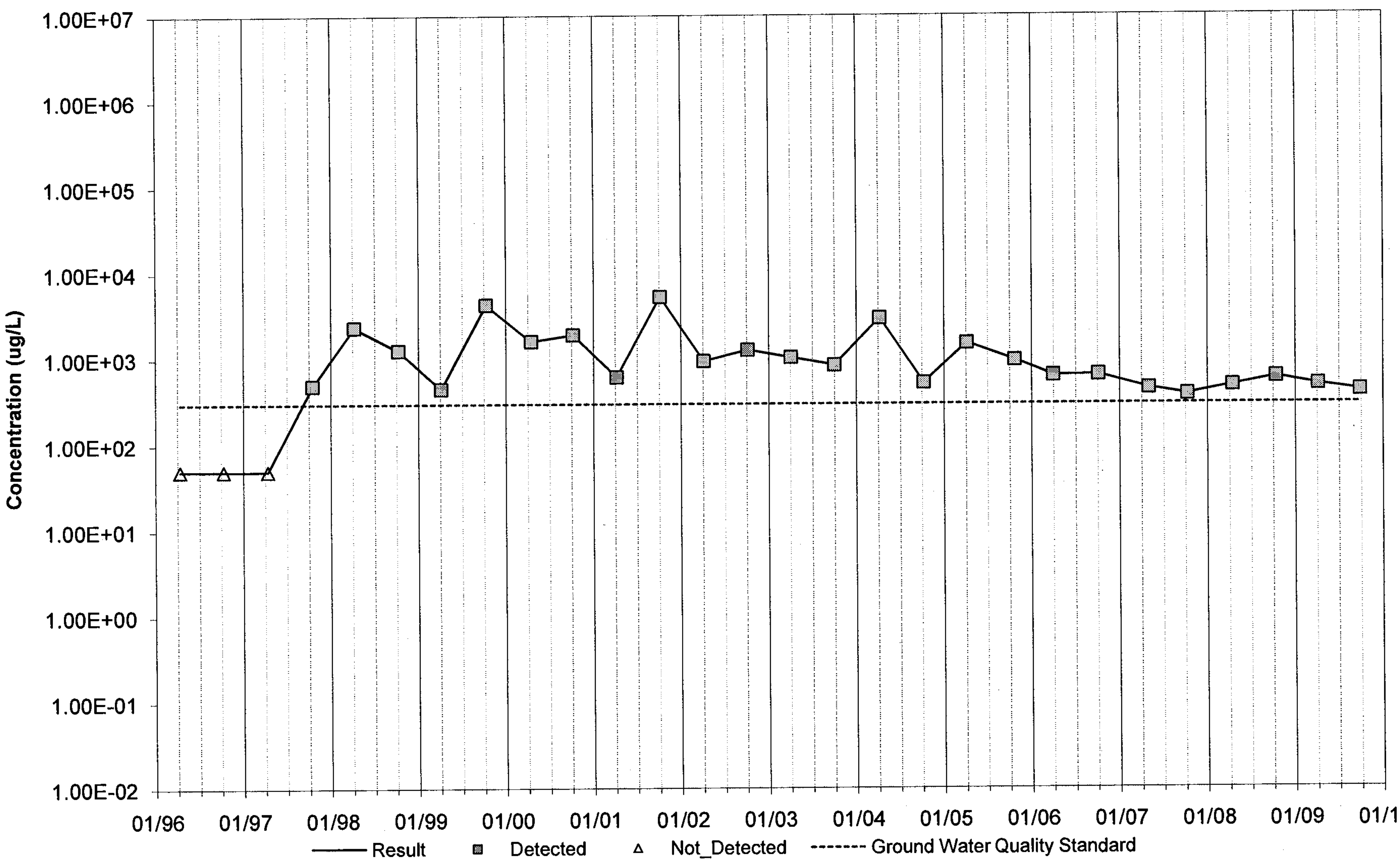
Monitoring Well: RCRA-D7
7439-89-6 (Iron)
Log Scale Concentrations



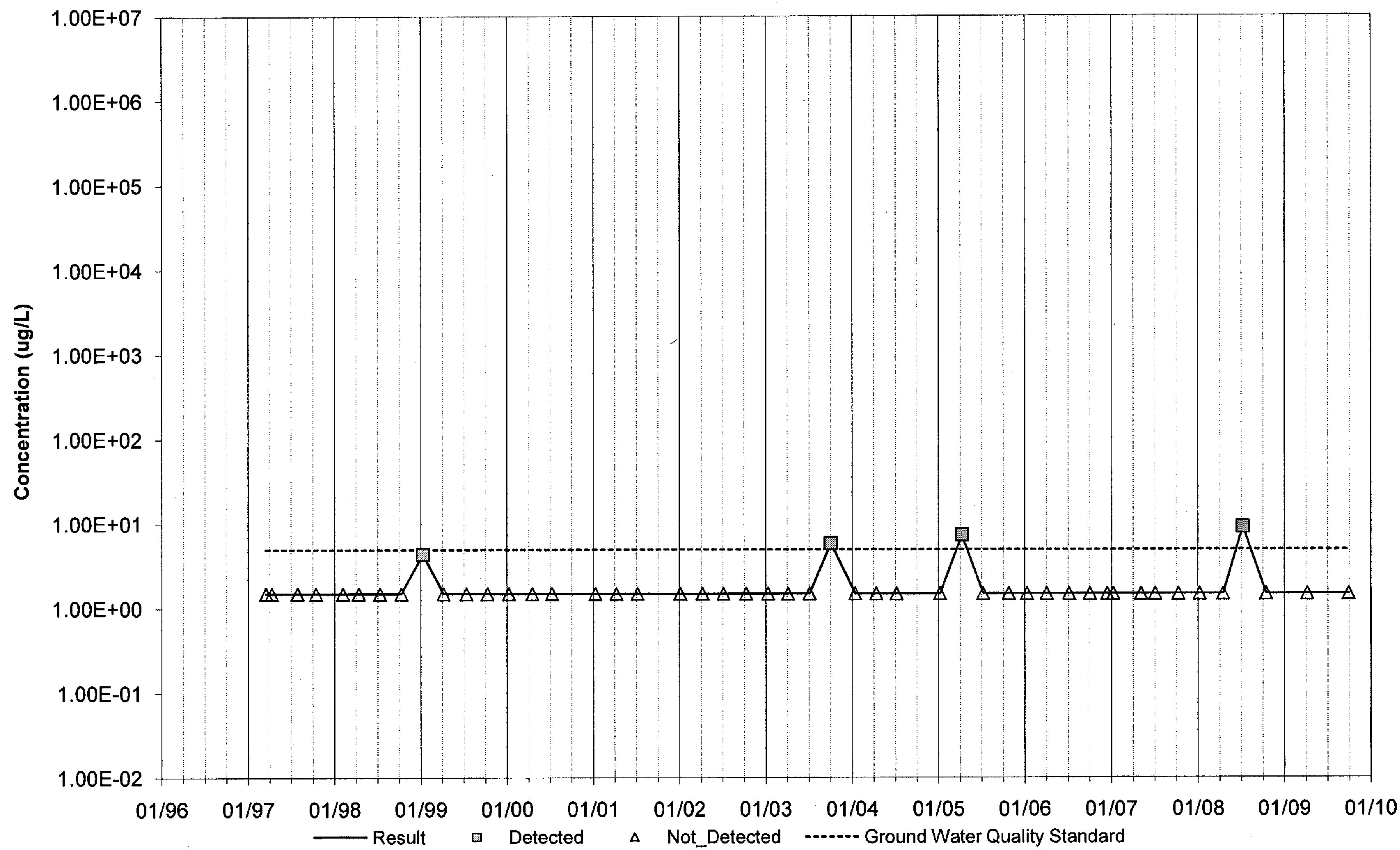
Monitoring Well: RCRA-D8
7439-89-6 (Iron)
Log Scale Concentrations



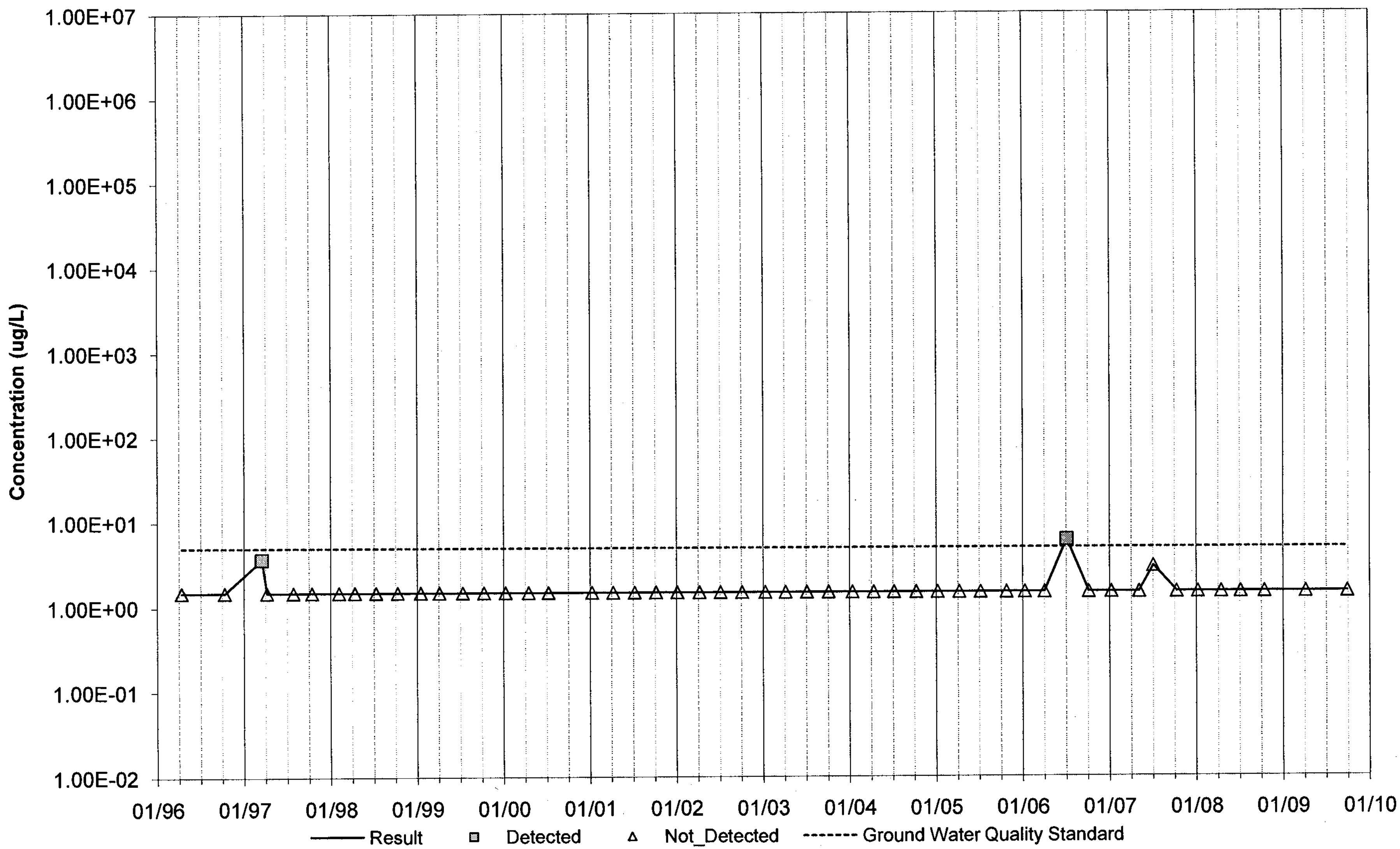
Monitoring Well: RCRA-D9
7439-89-6 (Iron)
Log Scale Concentrations

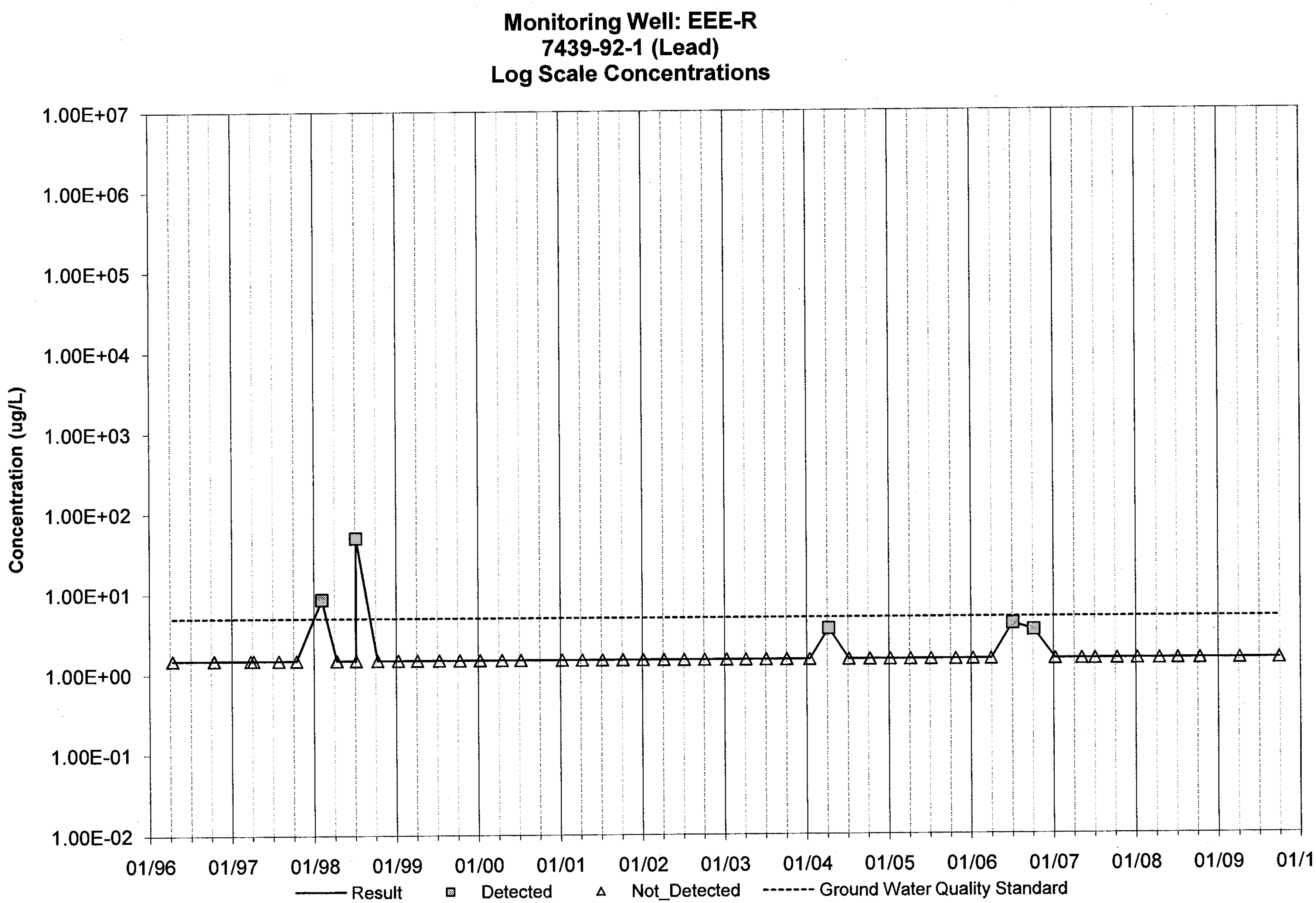


Monitoring Well: 16-MW-2
7439-92-1 (Lead)
Log Scale Concentrations

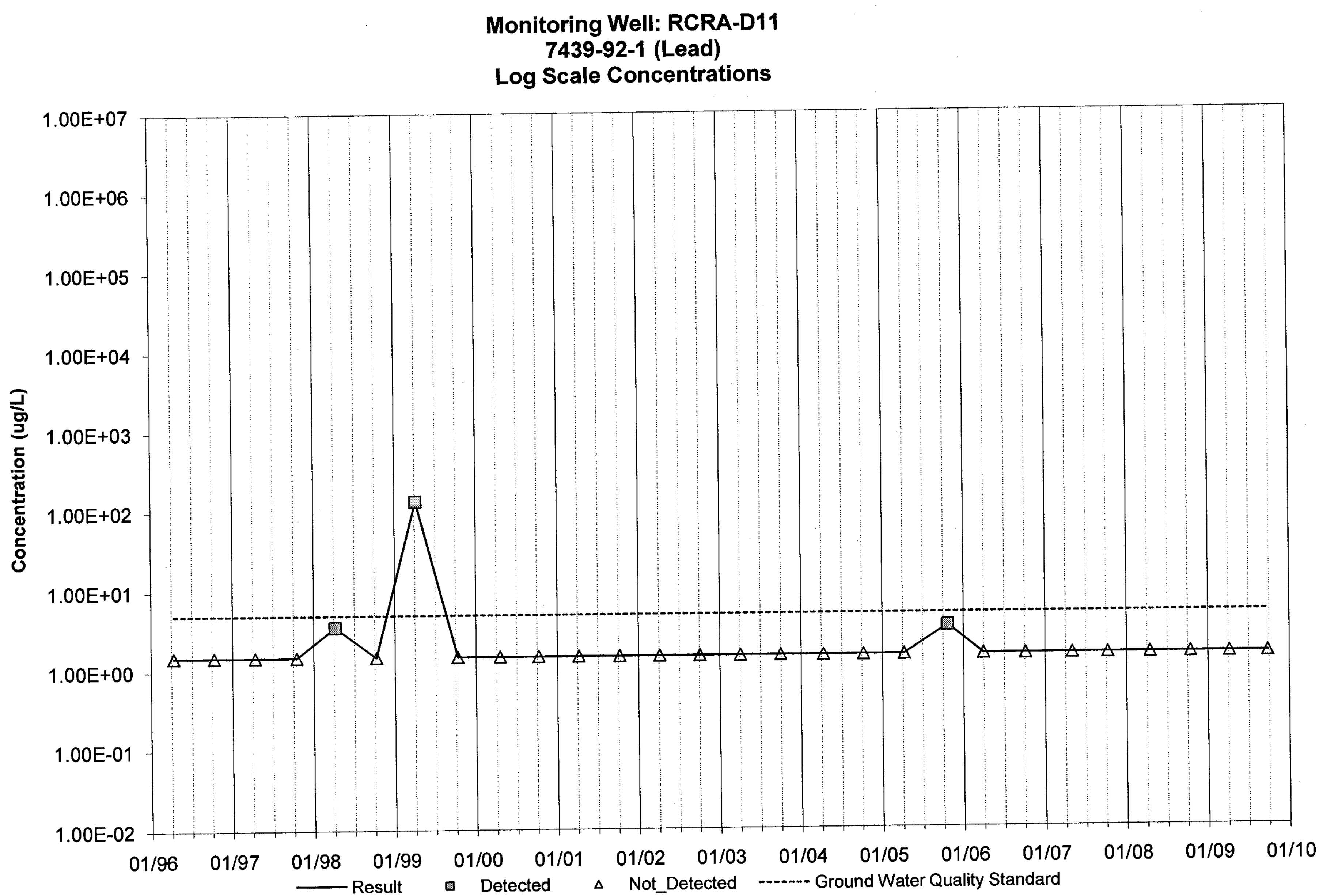


Monitoring Well: AAA
7439-92-1 (Lead)
Log Scale Concentrations



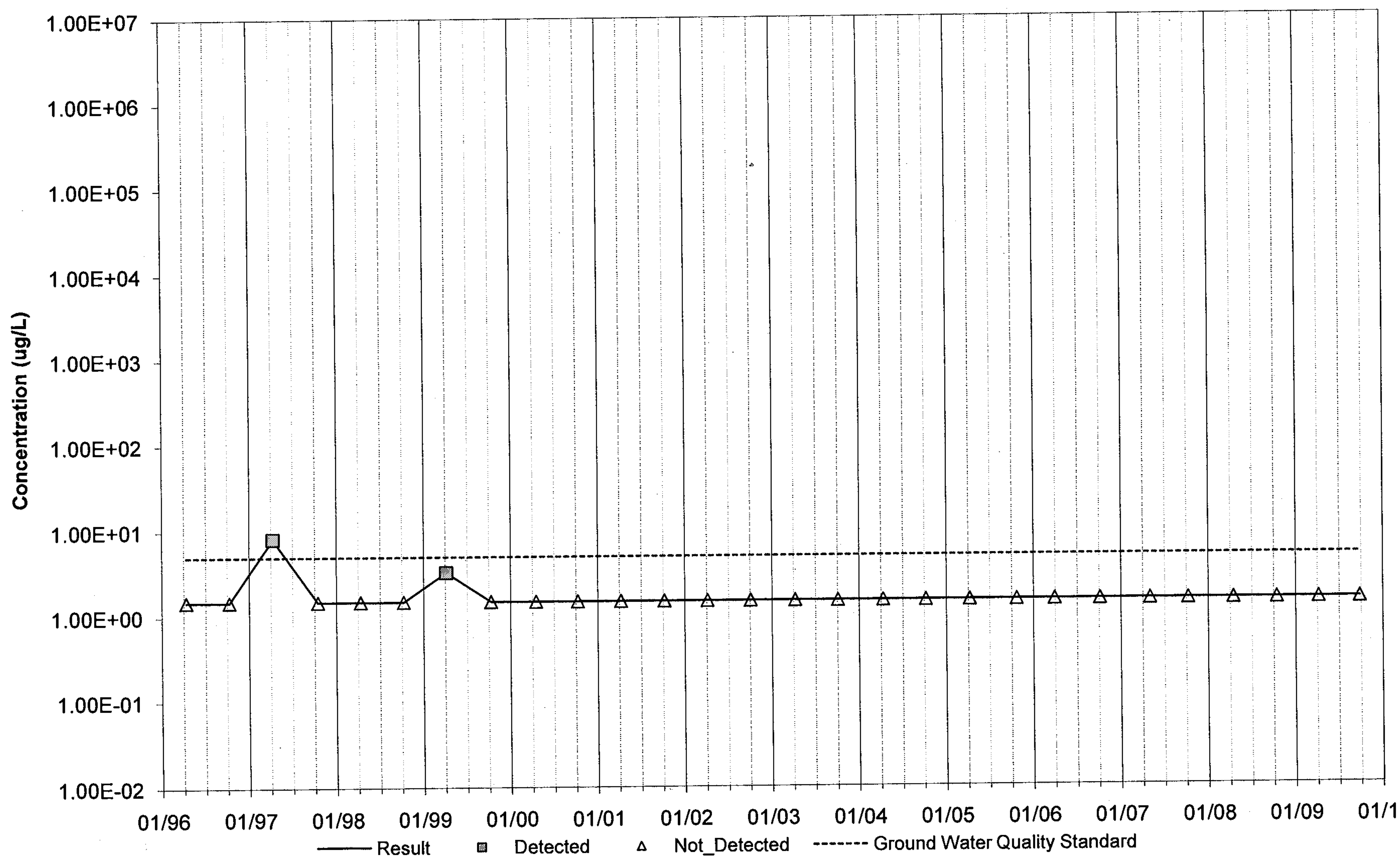


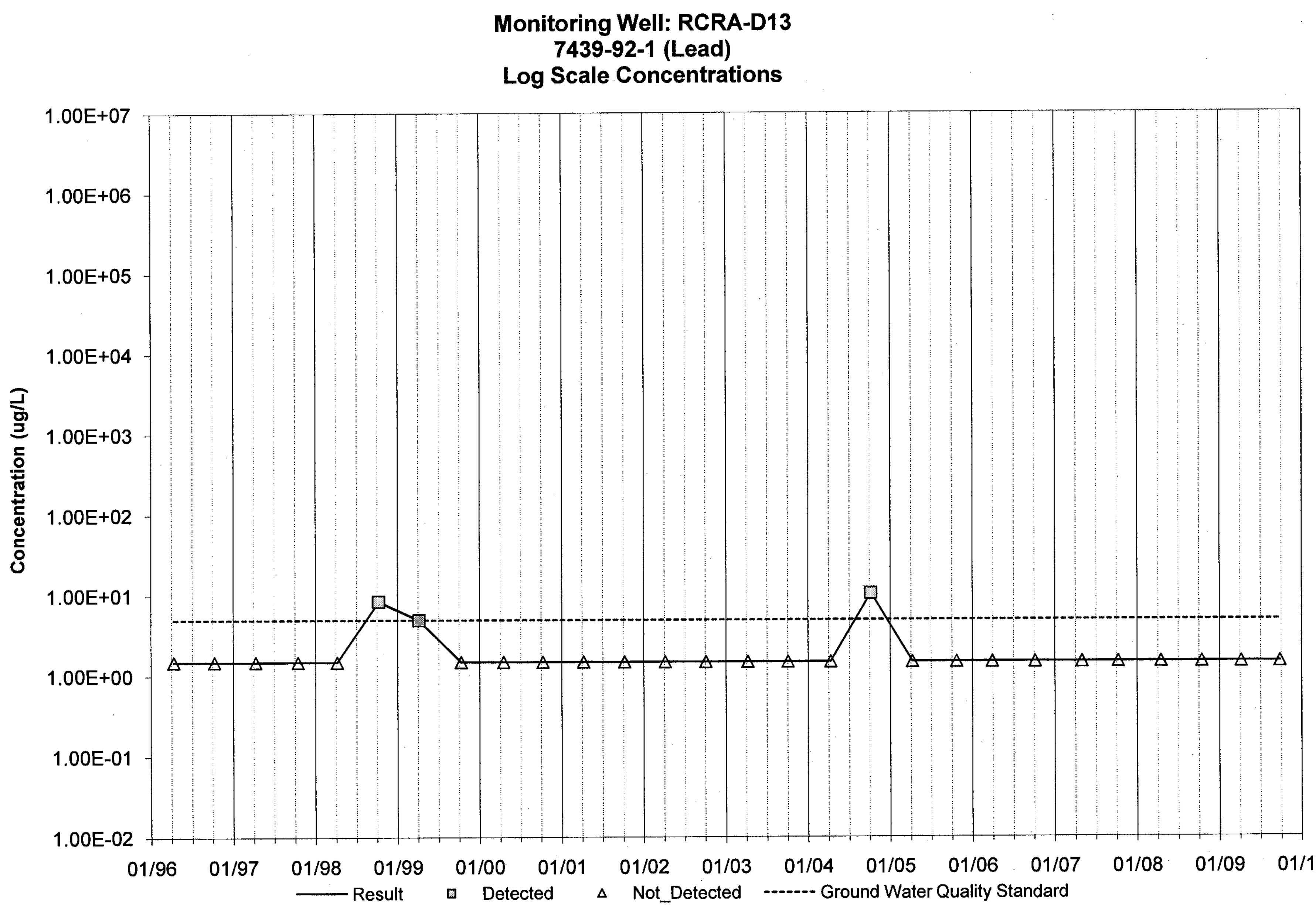
Monitoring Well: EEE-R
7439-92-1 (Lead)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



Monitoring Well: RCRA-D11
7439-92-1 (Lead)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

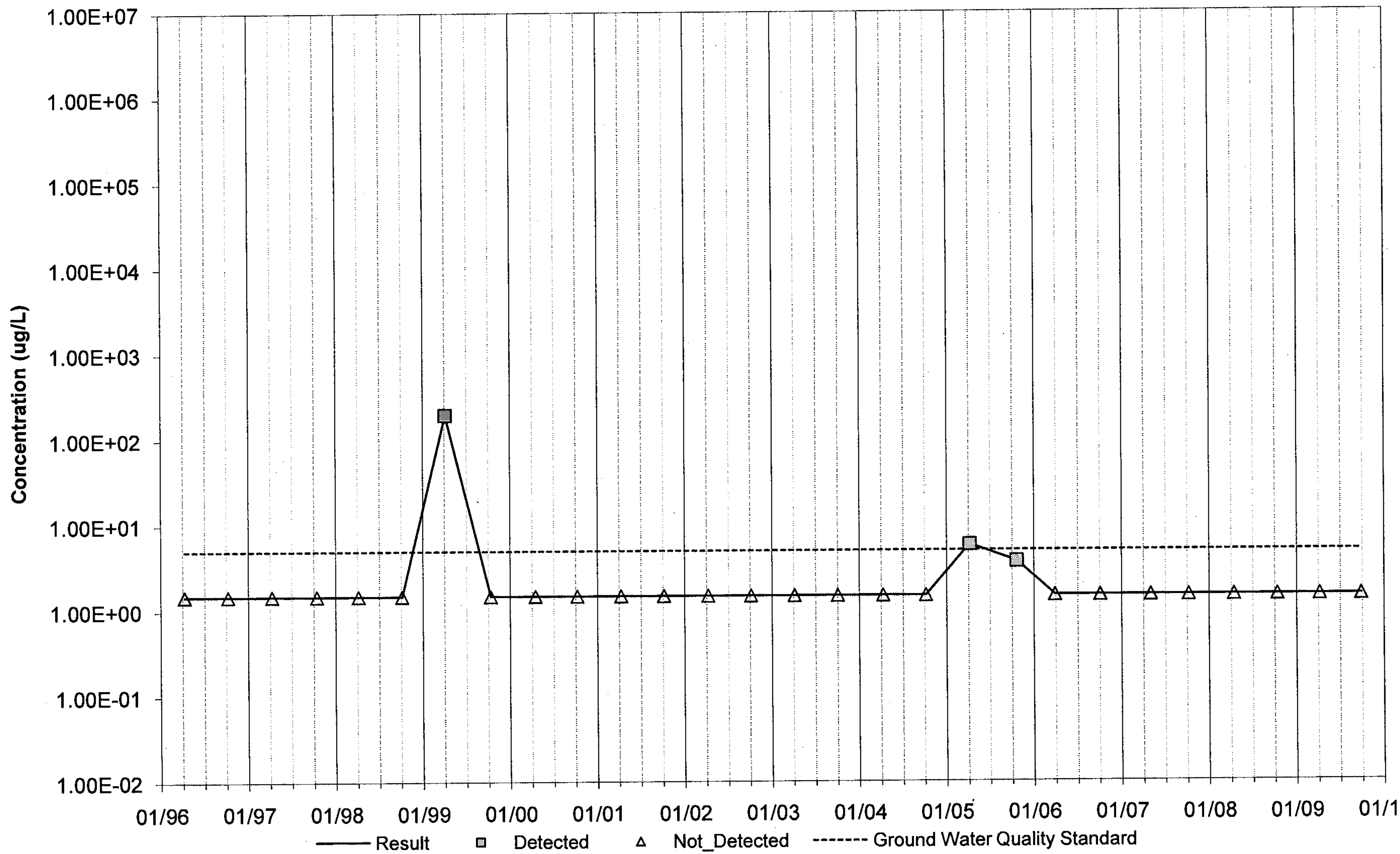
Monitoring Well: RCRA-D12
7439-92-1 (Lead)
Log Scale Concentrations



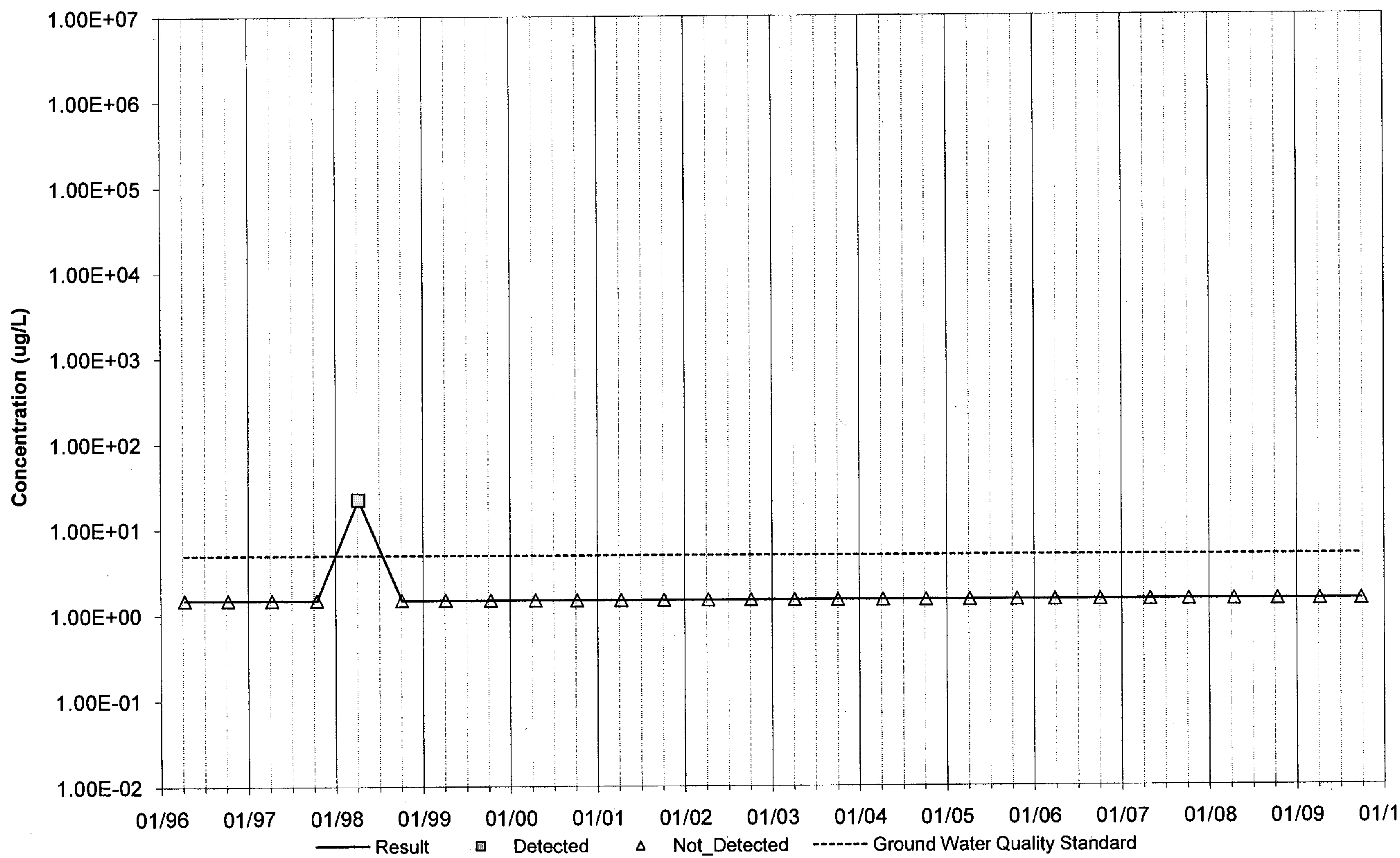


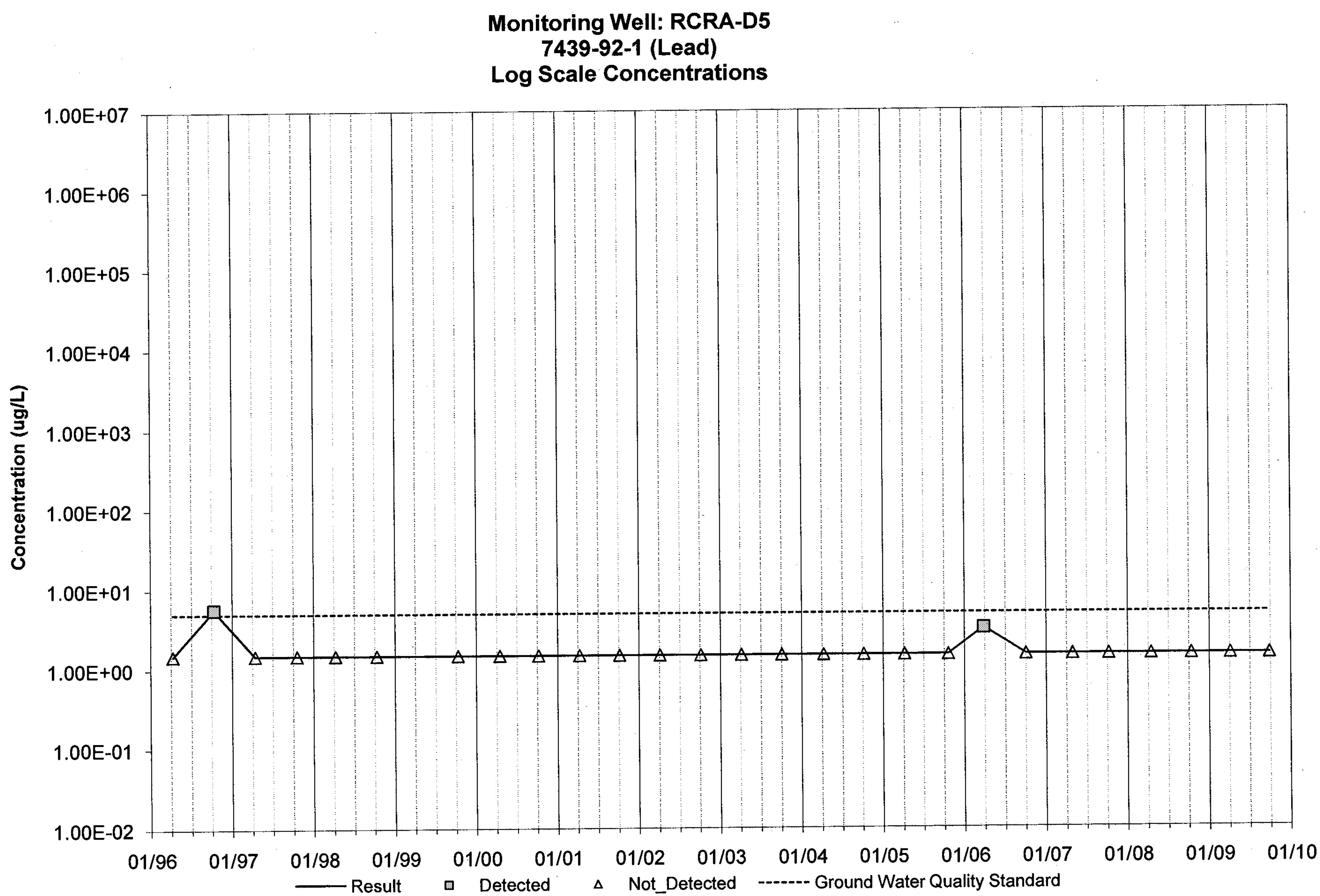
Monitoring Well: RCRA-D13
7439-92-1 (Lead)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

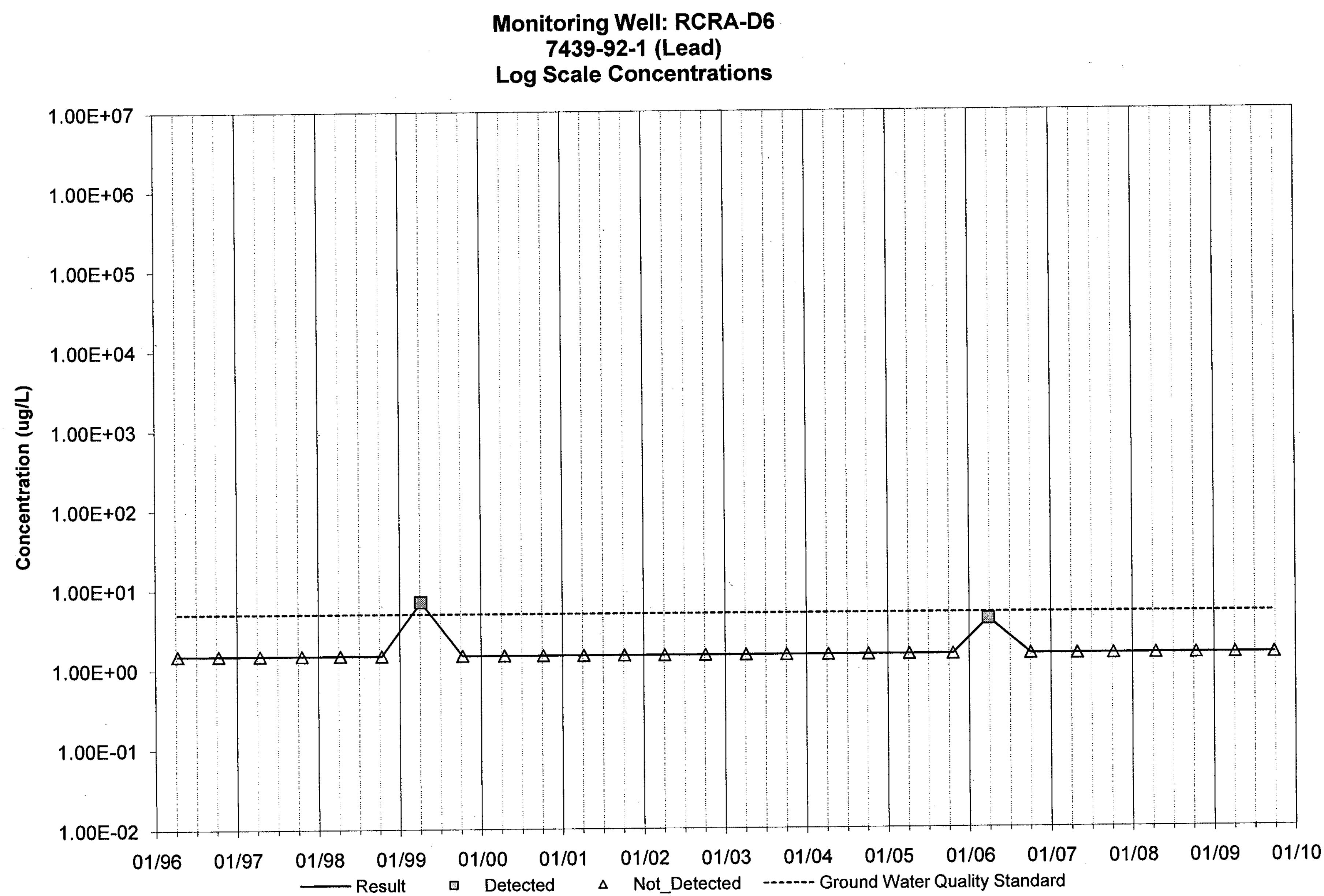
Monitoring Well: RCRA-D3
7439-92-1 (Lead)
Log Scale Concentrations



Monitoring Well: RCRA-D4
7439-92-1 (Lead)
Log Scale Concentrations

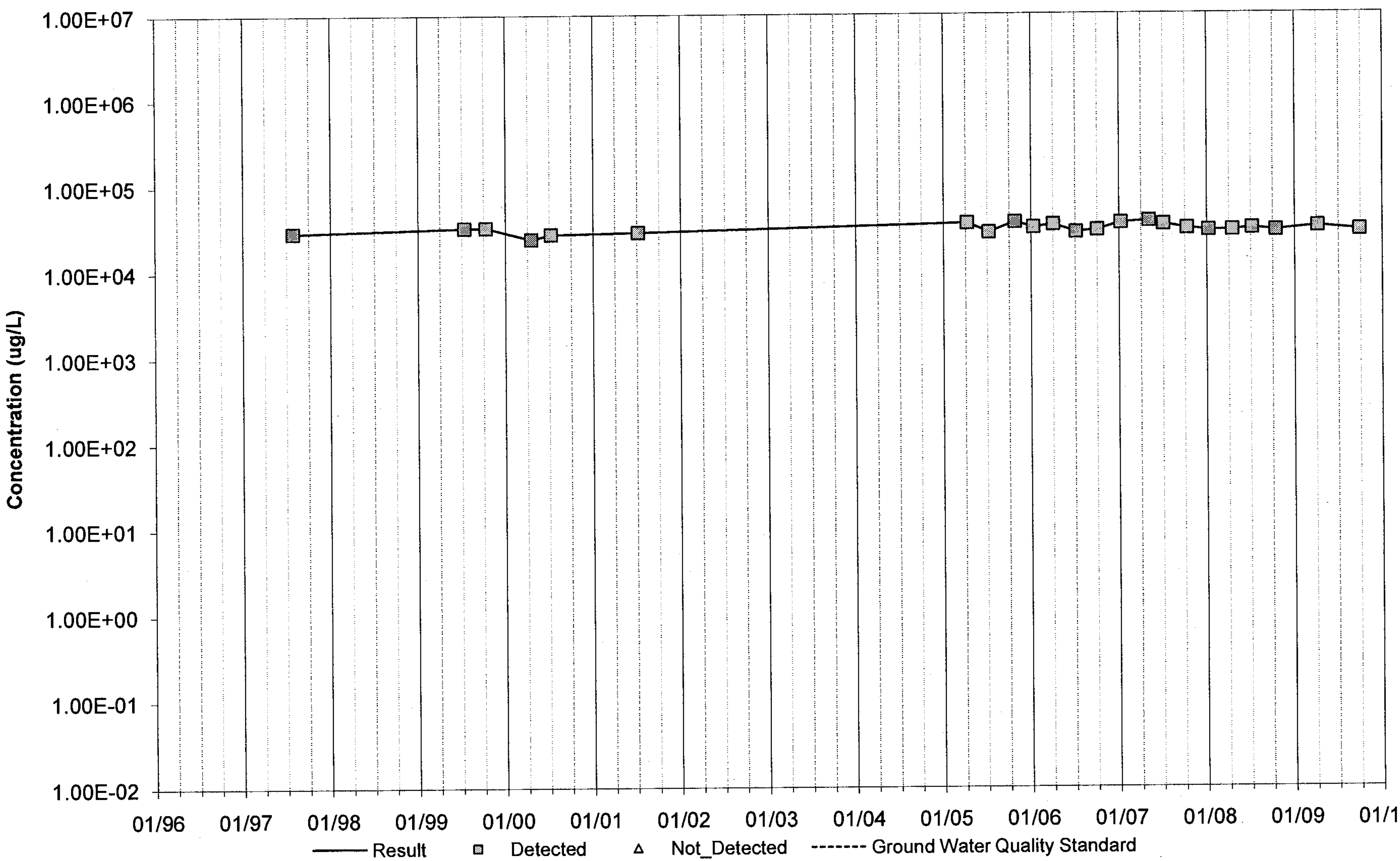



Monitoring Well: RCRA-D5
7439-92-1 (Lead)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

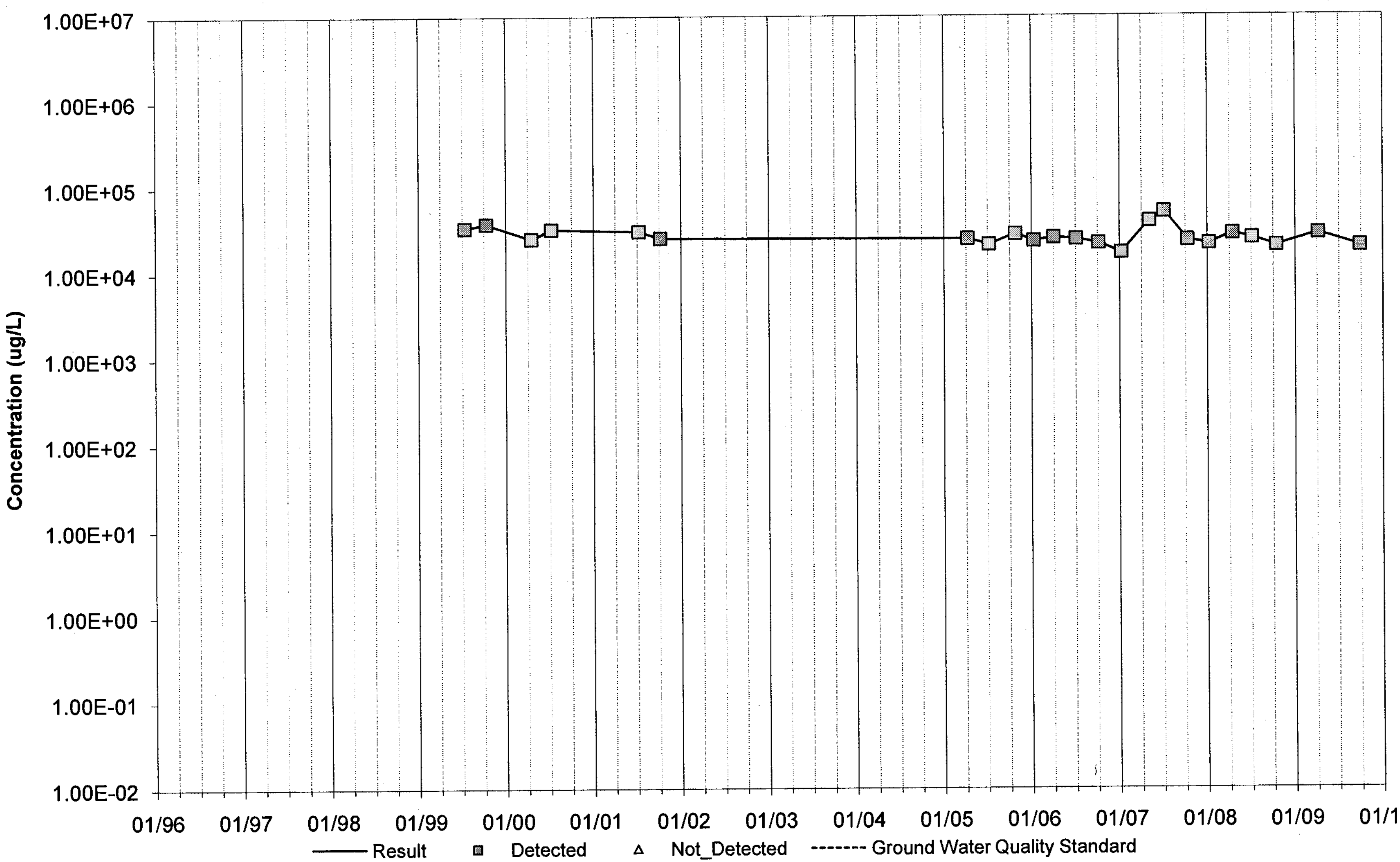


Monitoring Well: RCRA-D6
7439-92-1 (Lead)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

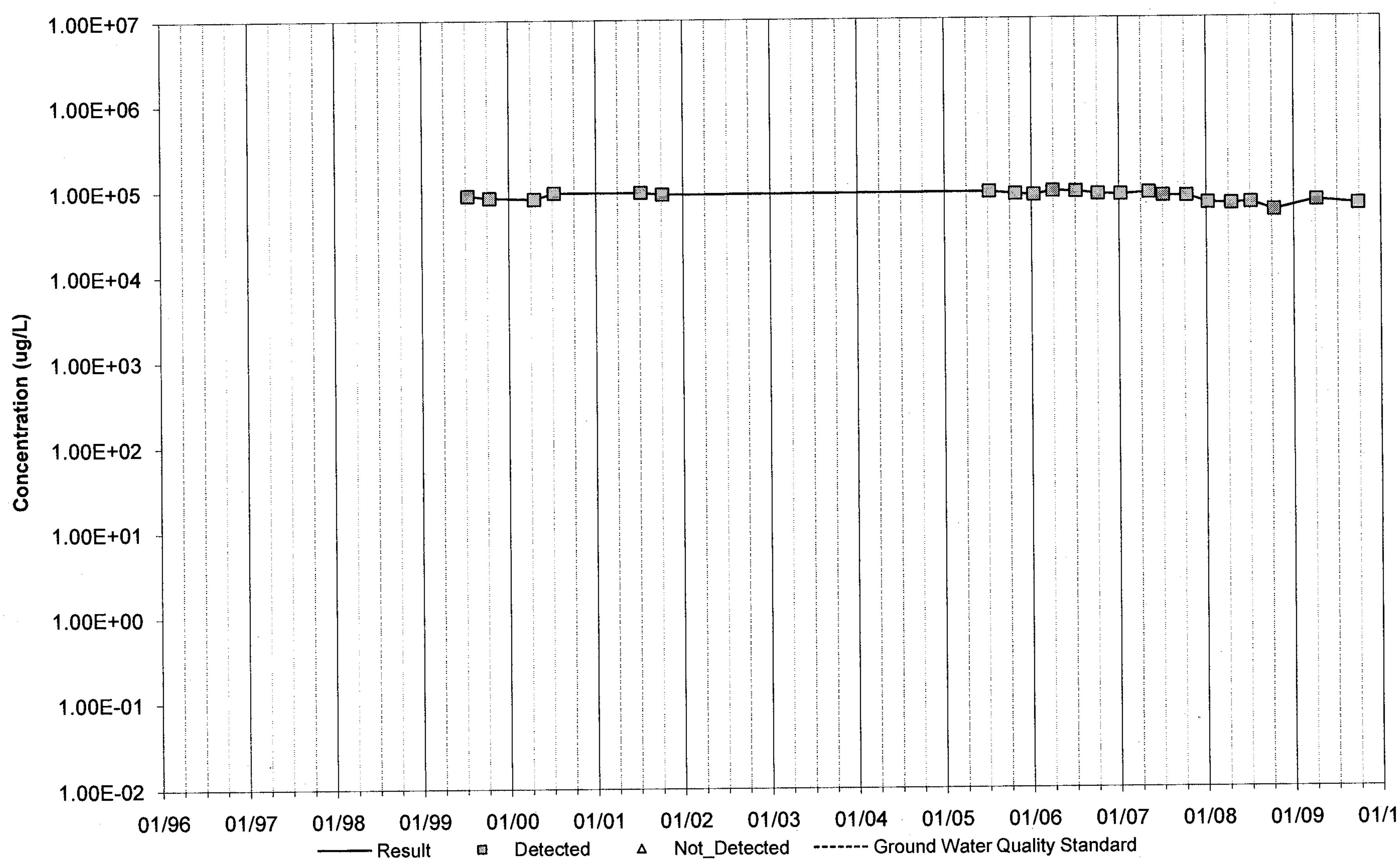
Monitoring Well: 16-MW-2
7439-95-4 (Magnesium)
Log Scale Concentrations



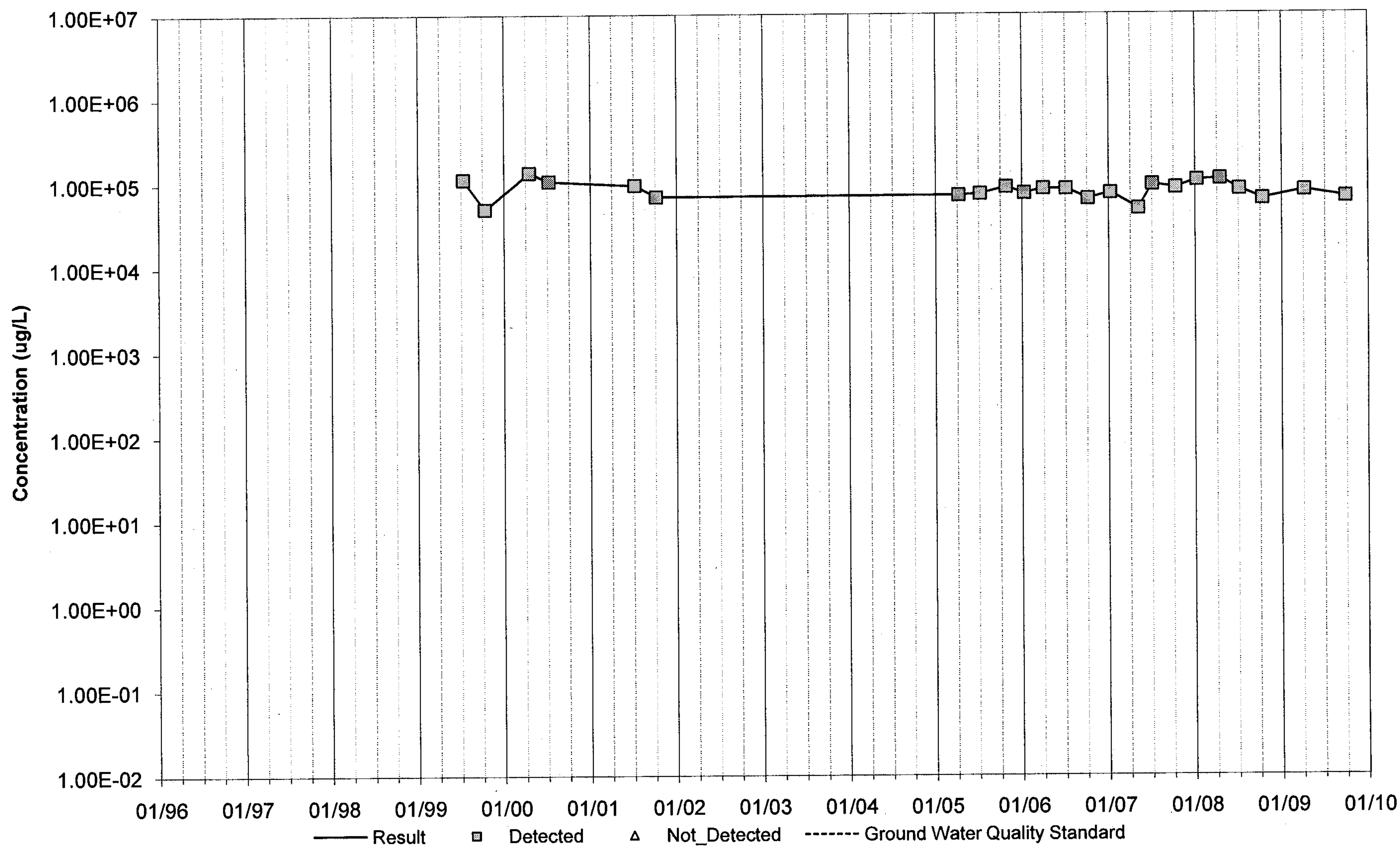
Monitoring Well: AAA
7439-95-4 (Magnesium)
Log Scale Concentrations



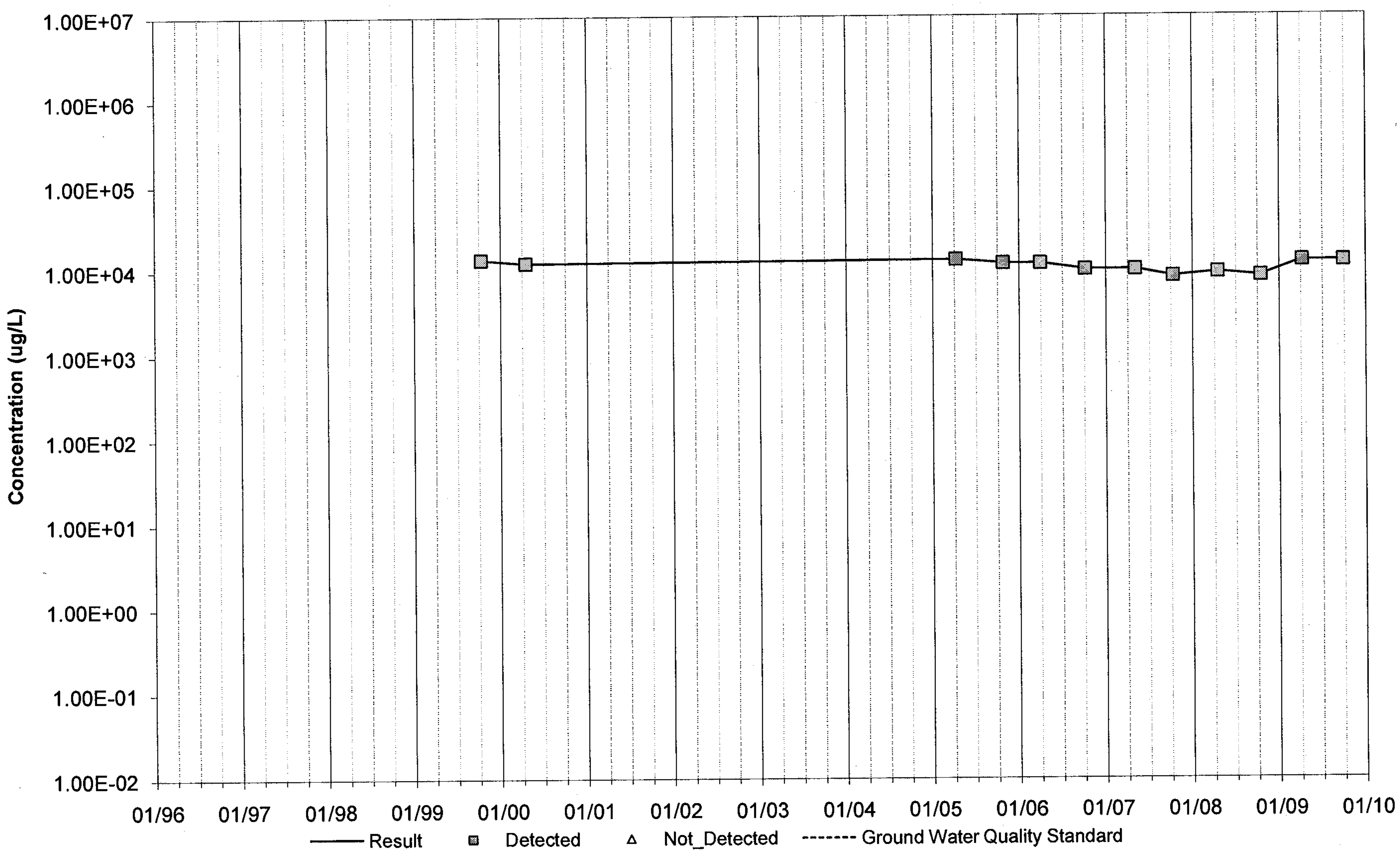
Monitoring Well: CCC-R
7439-95-4 (Magnesium)
Log Scale Concentrations

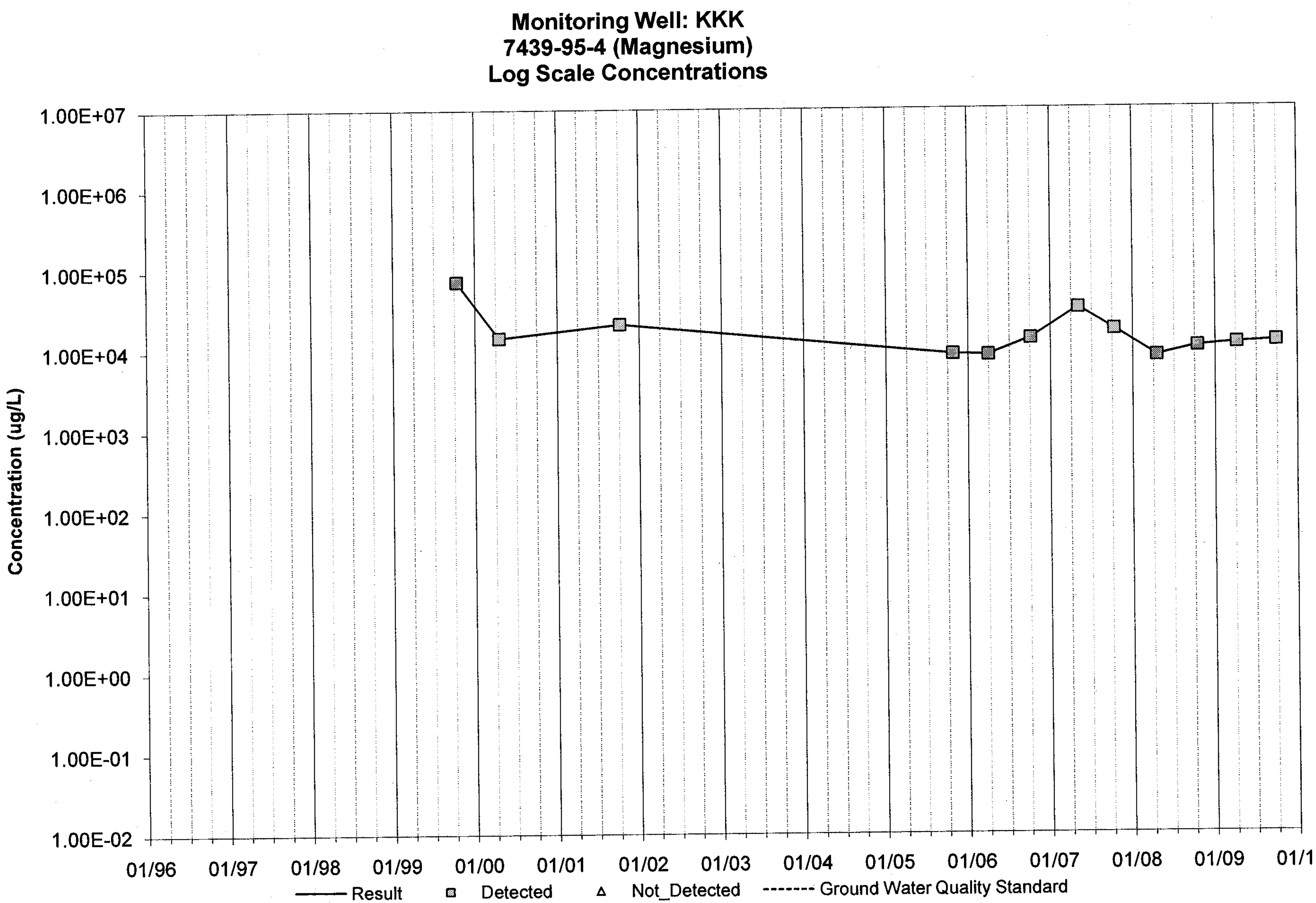


Monitoring Well: EEE-R
7439-95-4 (Magnesium)
Log Scale Concentrations



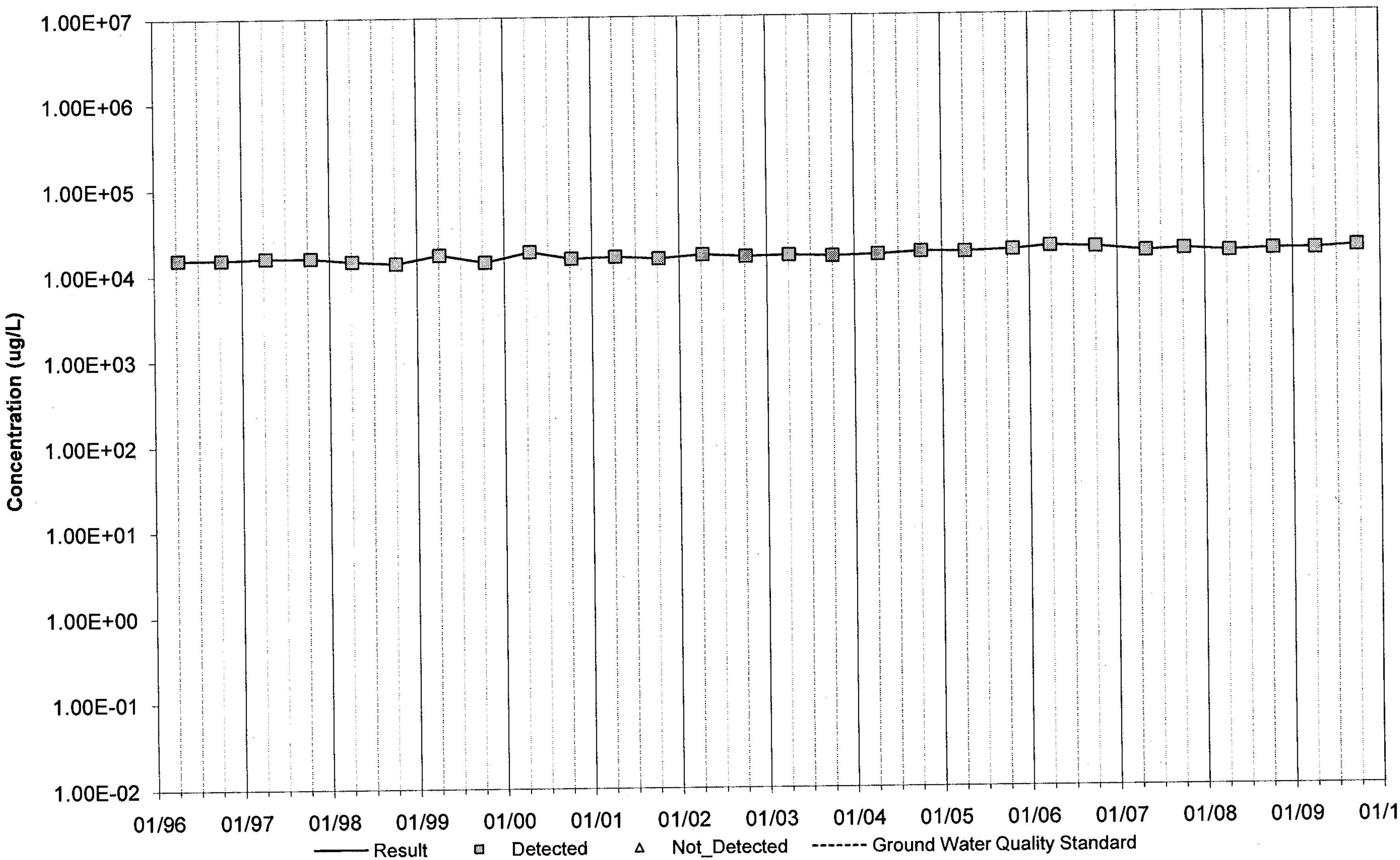
Monitoring Well: III
7439-95-4 (Magnesium)
Log Scale Concentrations



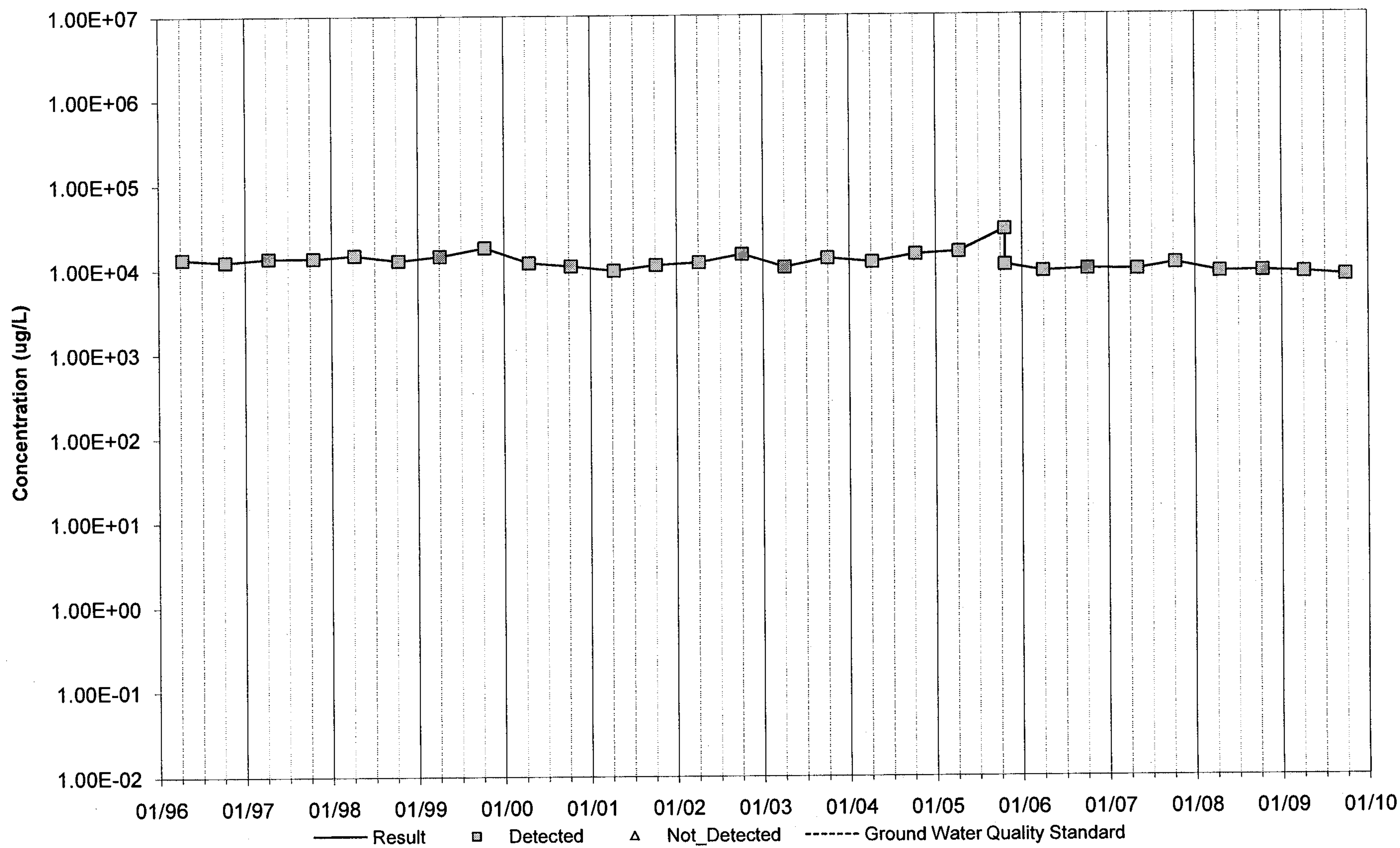


Monitoring Well: KKK
7439-95-4 (Magnesium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

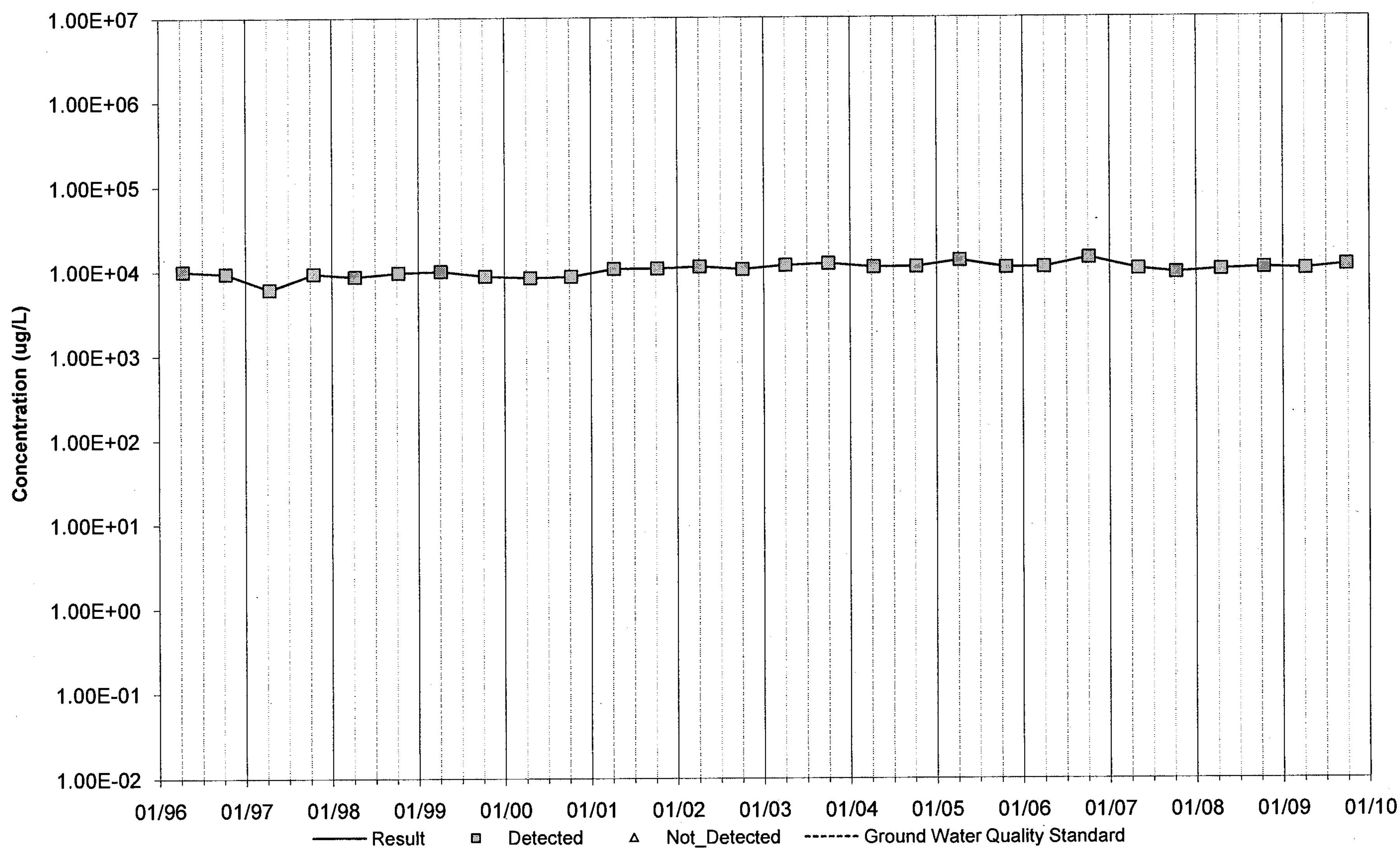
Monitoring Well: RCRA-D1
7439-95-4 (Magnesium)
Log Scale Concentrations

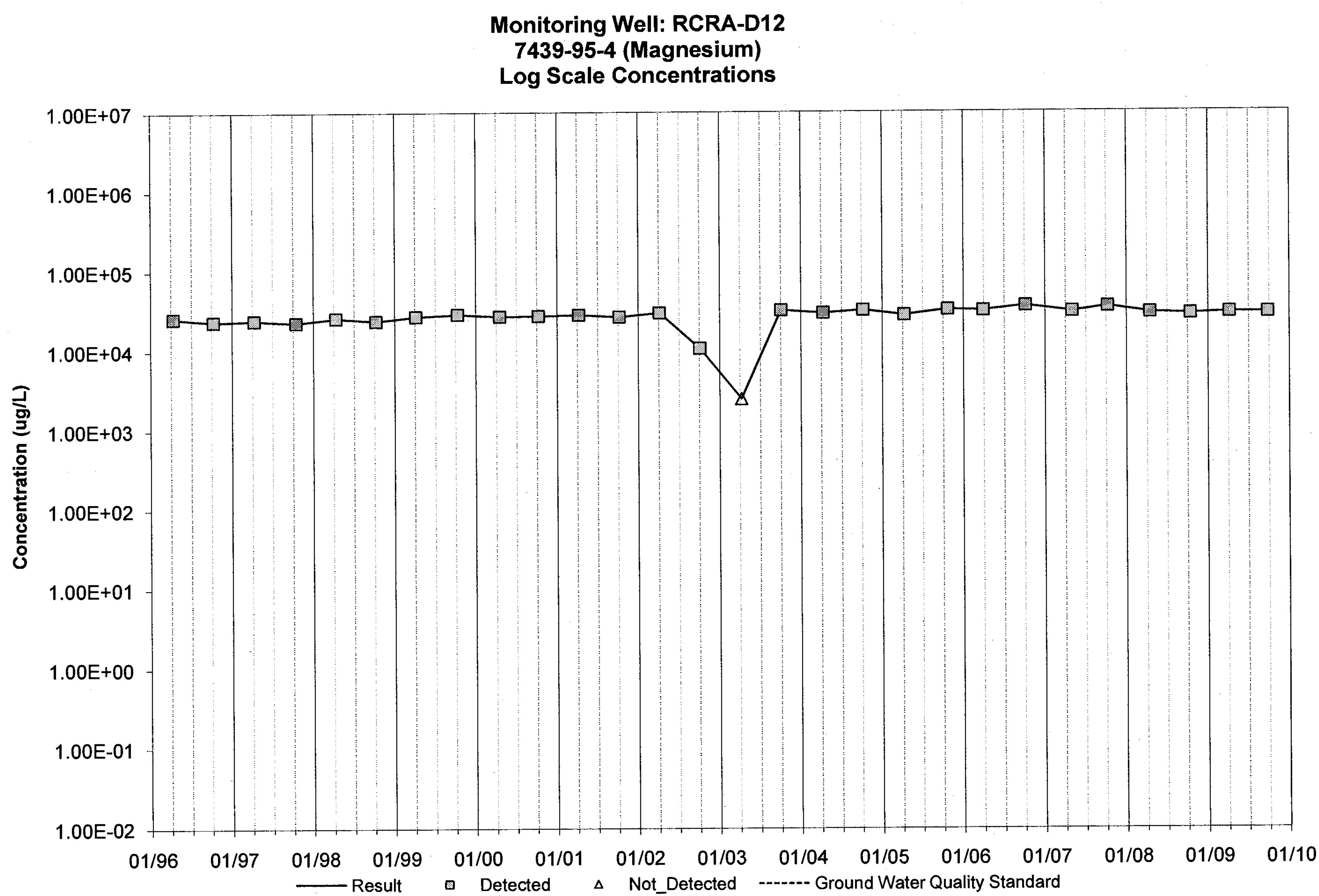


Monitoring Well: RCRA-D10
7439-95-4 (Magnesium)
Log Scale Concentrations



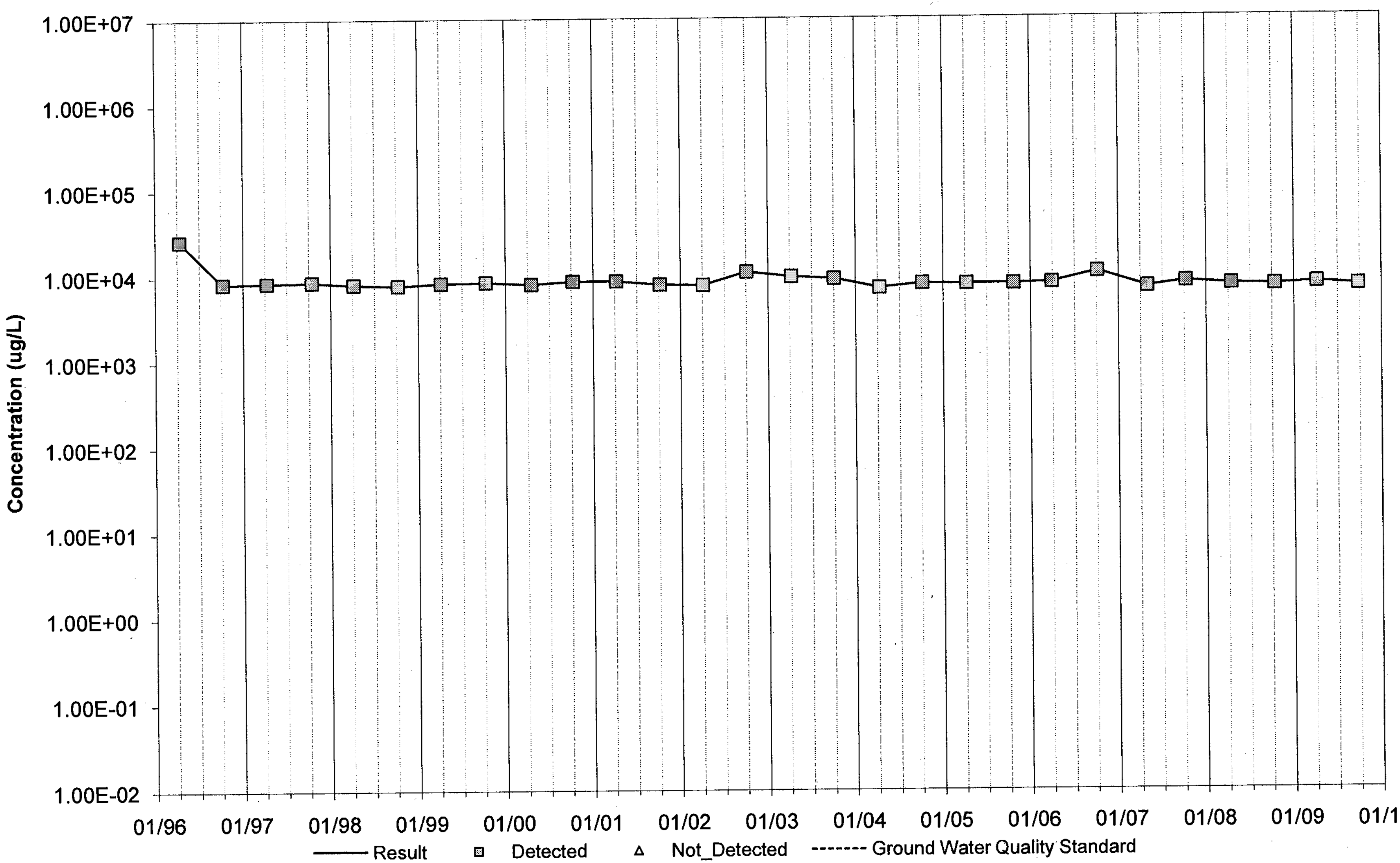
Monitoring Well: RCRA-D11
7439-95-4 (Magnesium)
Log Scale Concentrations



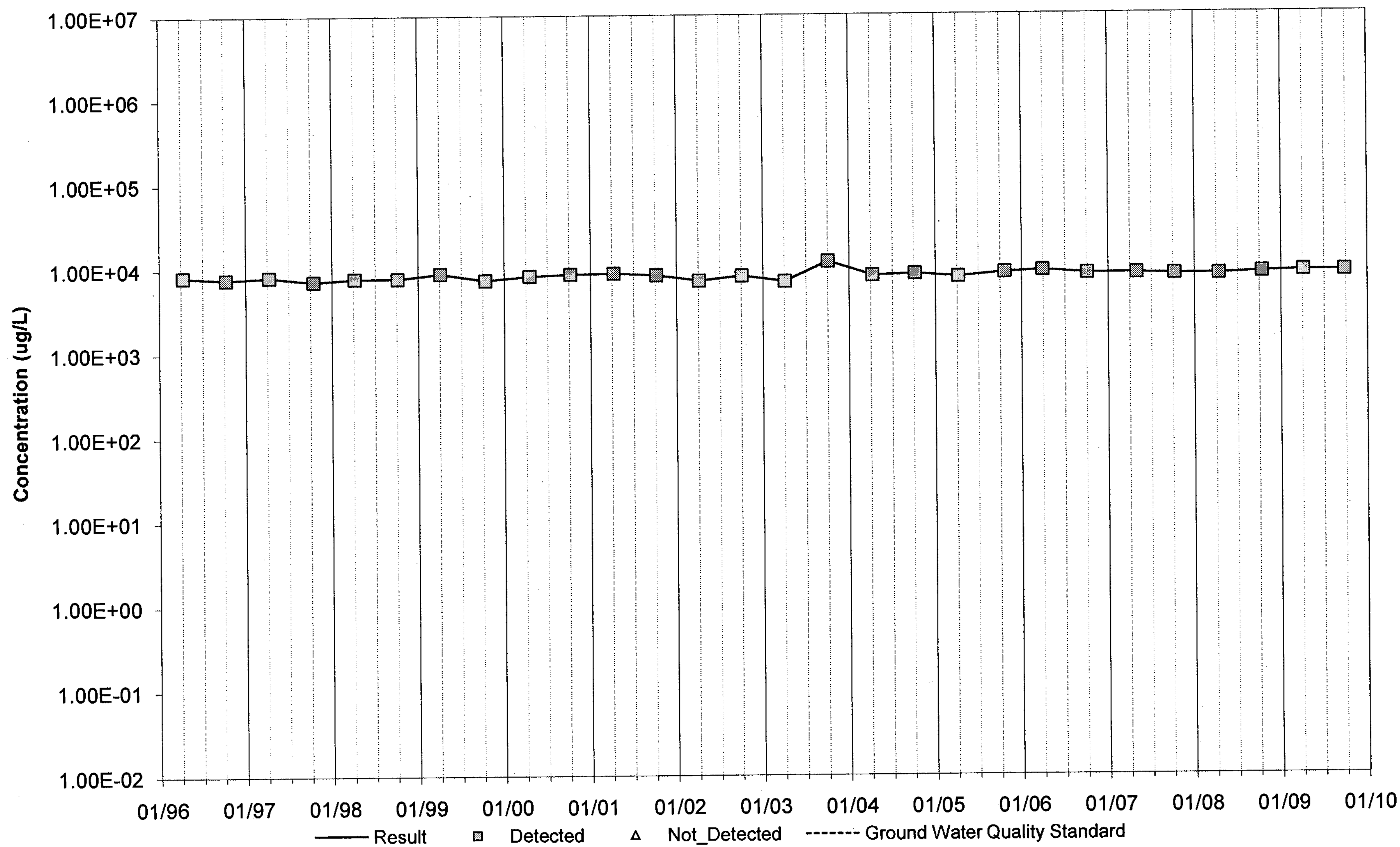


Monitoring Well: RCRA-D12
7439-95-4 (Magnesium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

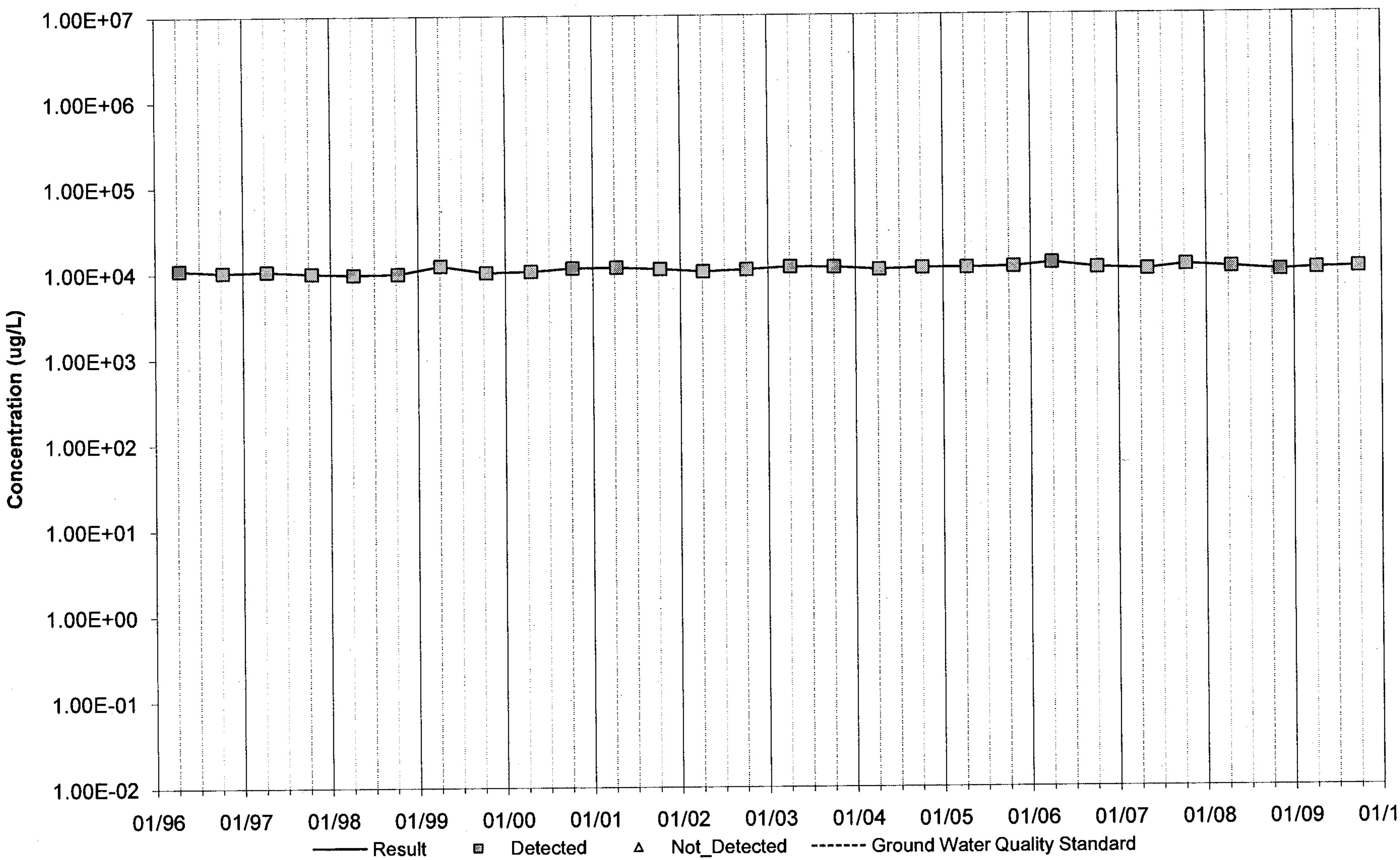
Monitoring Well: RCRA-D13
7439-95-4 (Magnesium)
Log Scale Concentrations

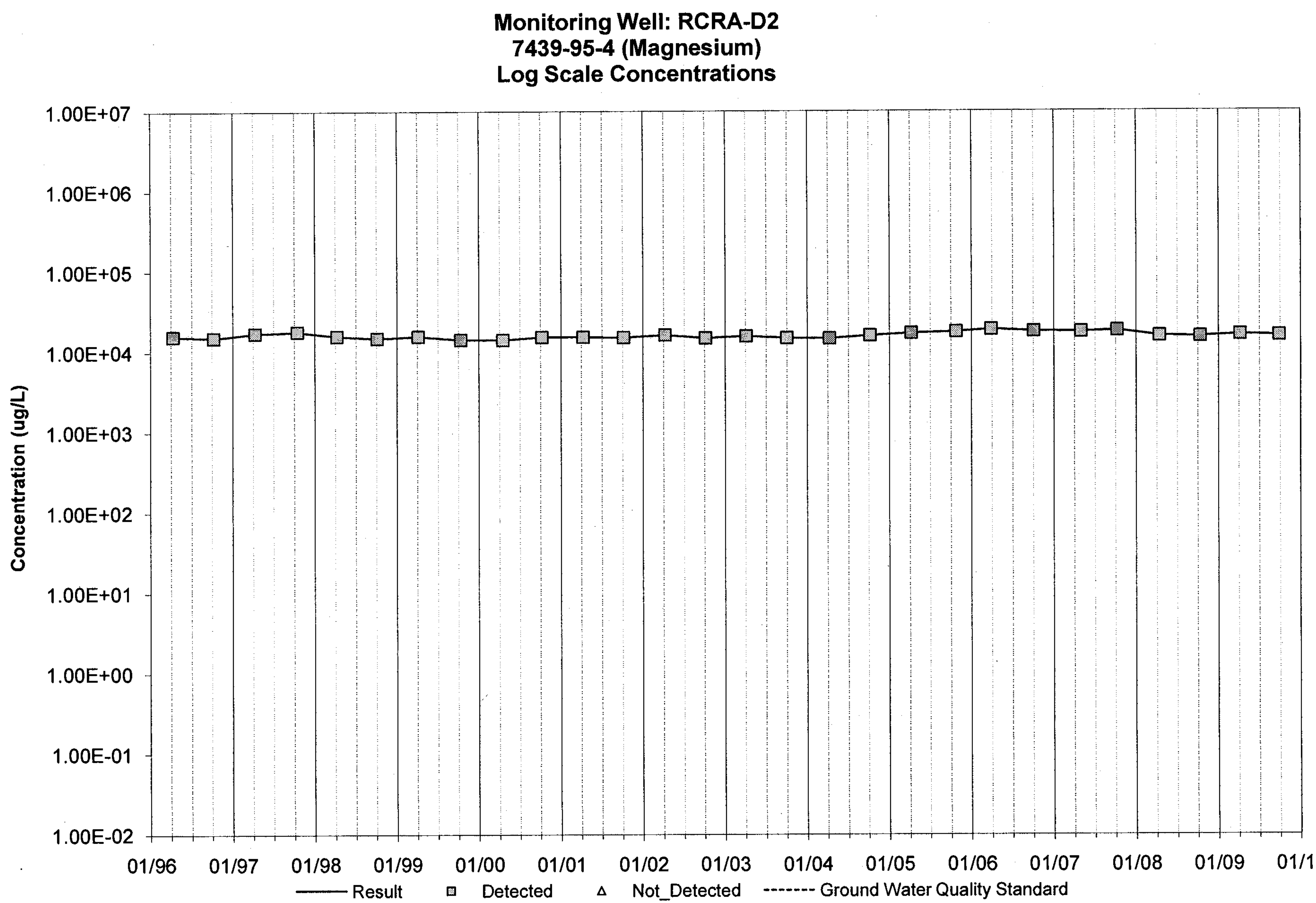


Monitoring Well: RCRA-D14
7439-95-4 (Magnesium)
Log Scale Concentrations



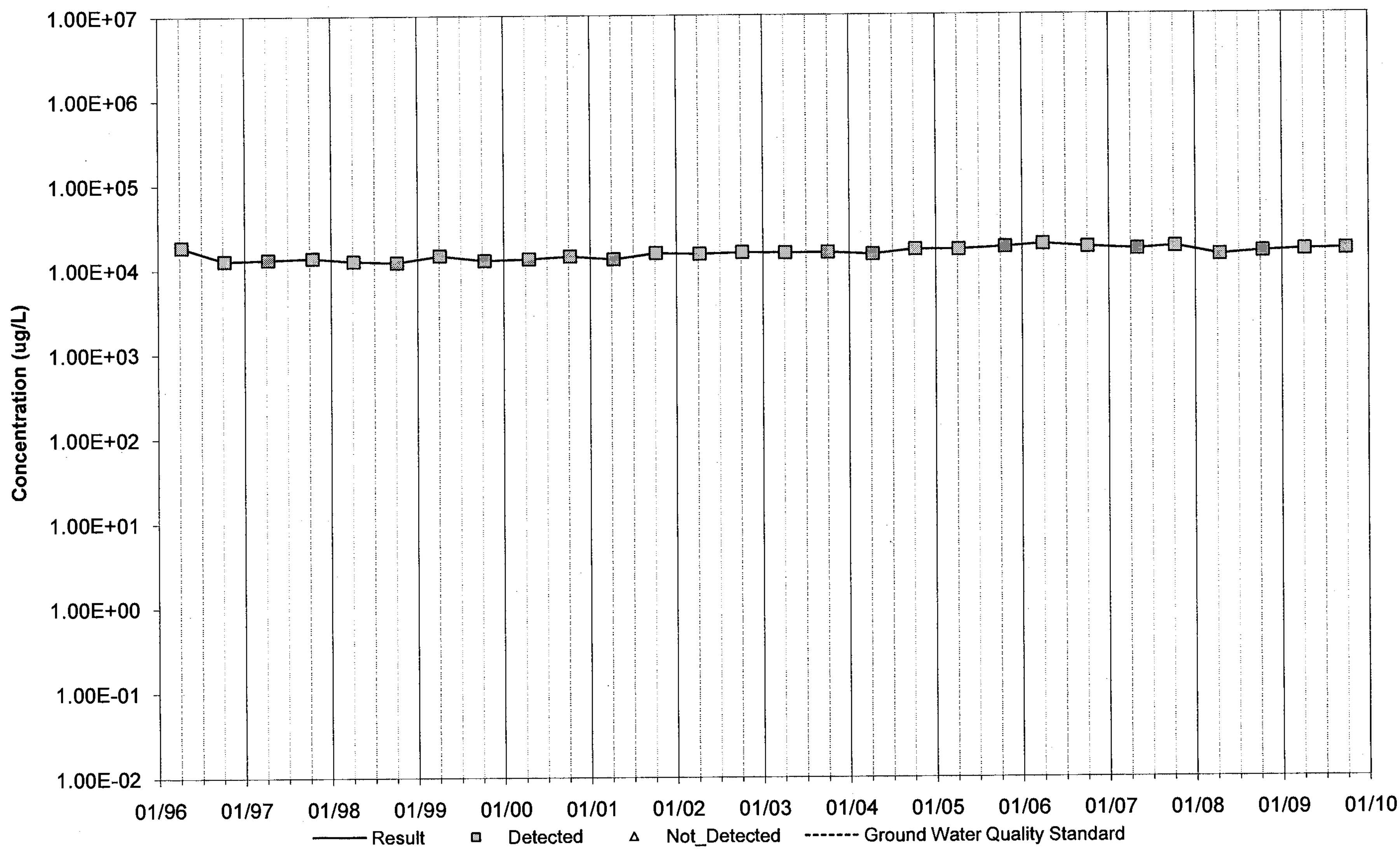
Monitoring Well: RCRA-D15
7439-95-4 (Magnesium)
Log Scale Concentrations



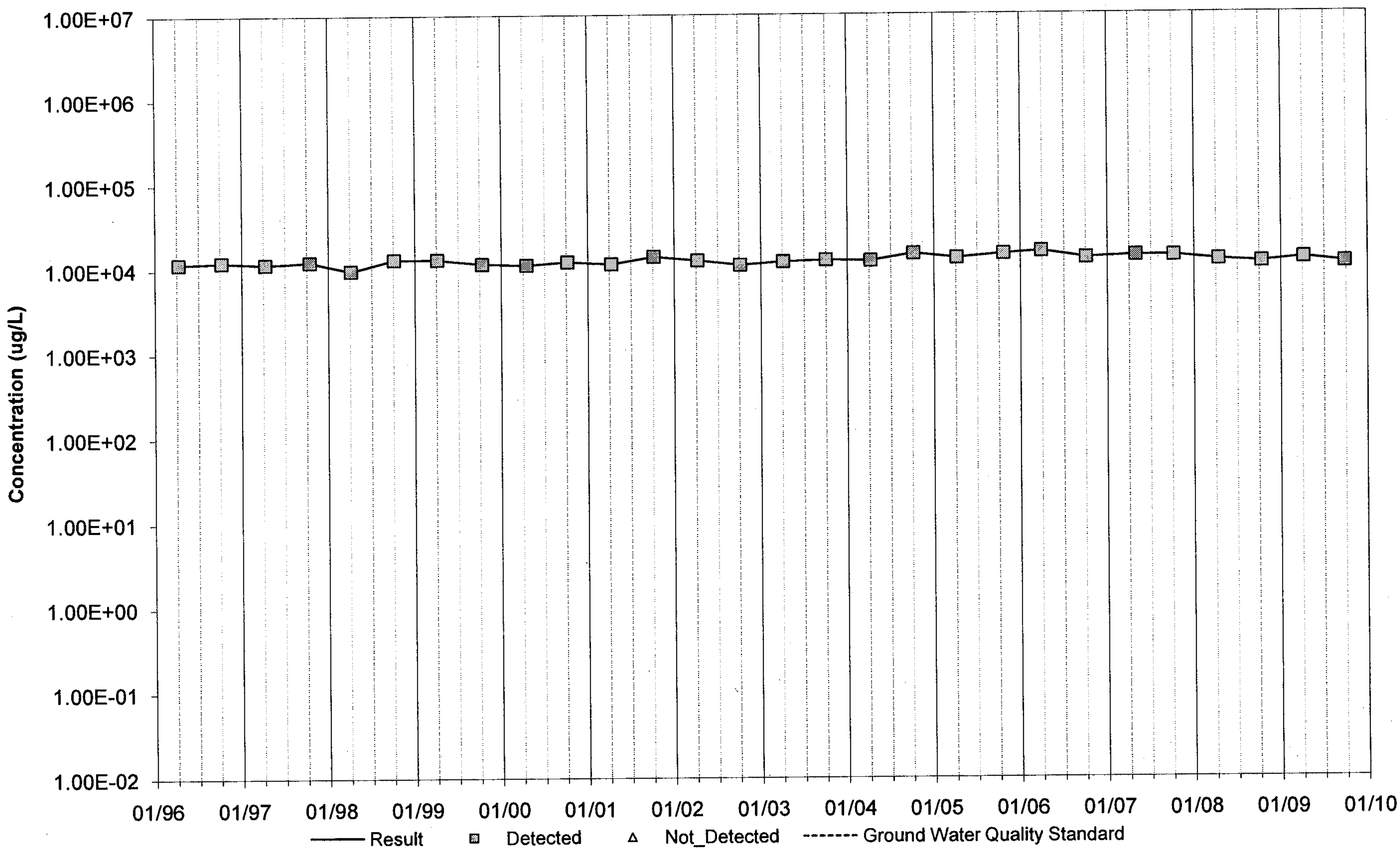


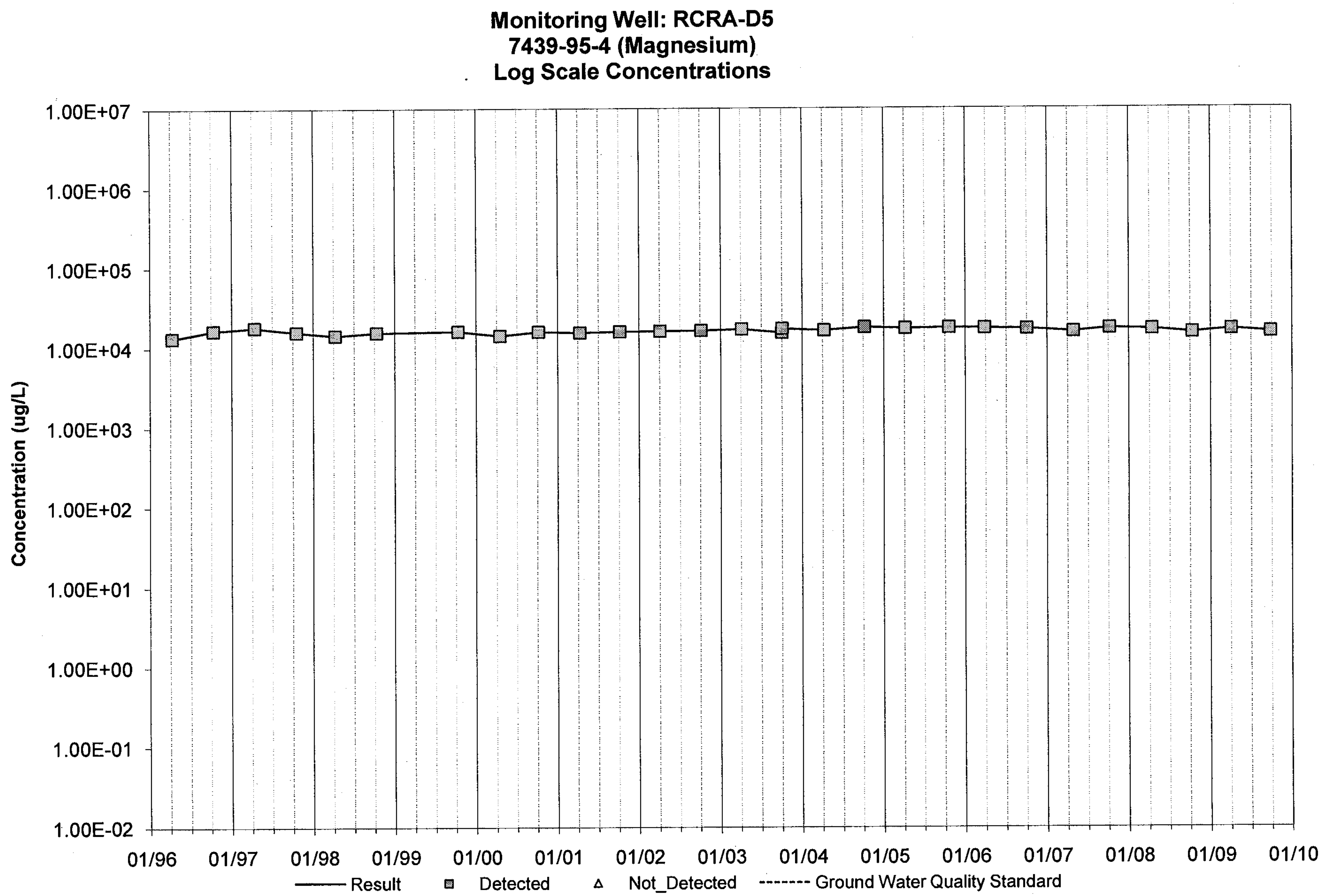
Monitoring Well: RCRA-D2
7439-95-4 (Magnesium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D3
7439-95-4 (Magnesium)
Log Scale Concentrations

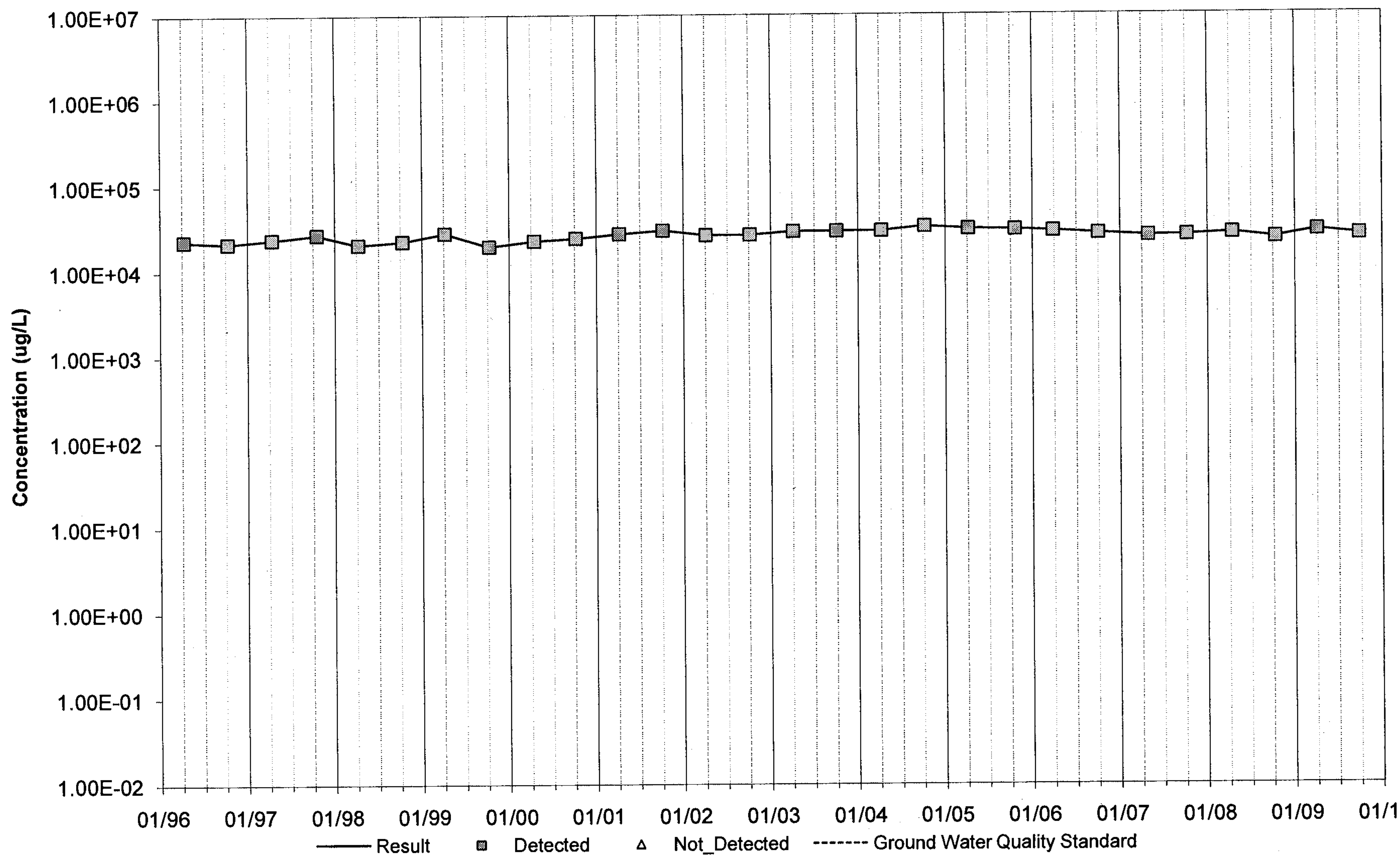


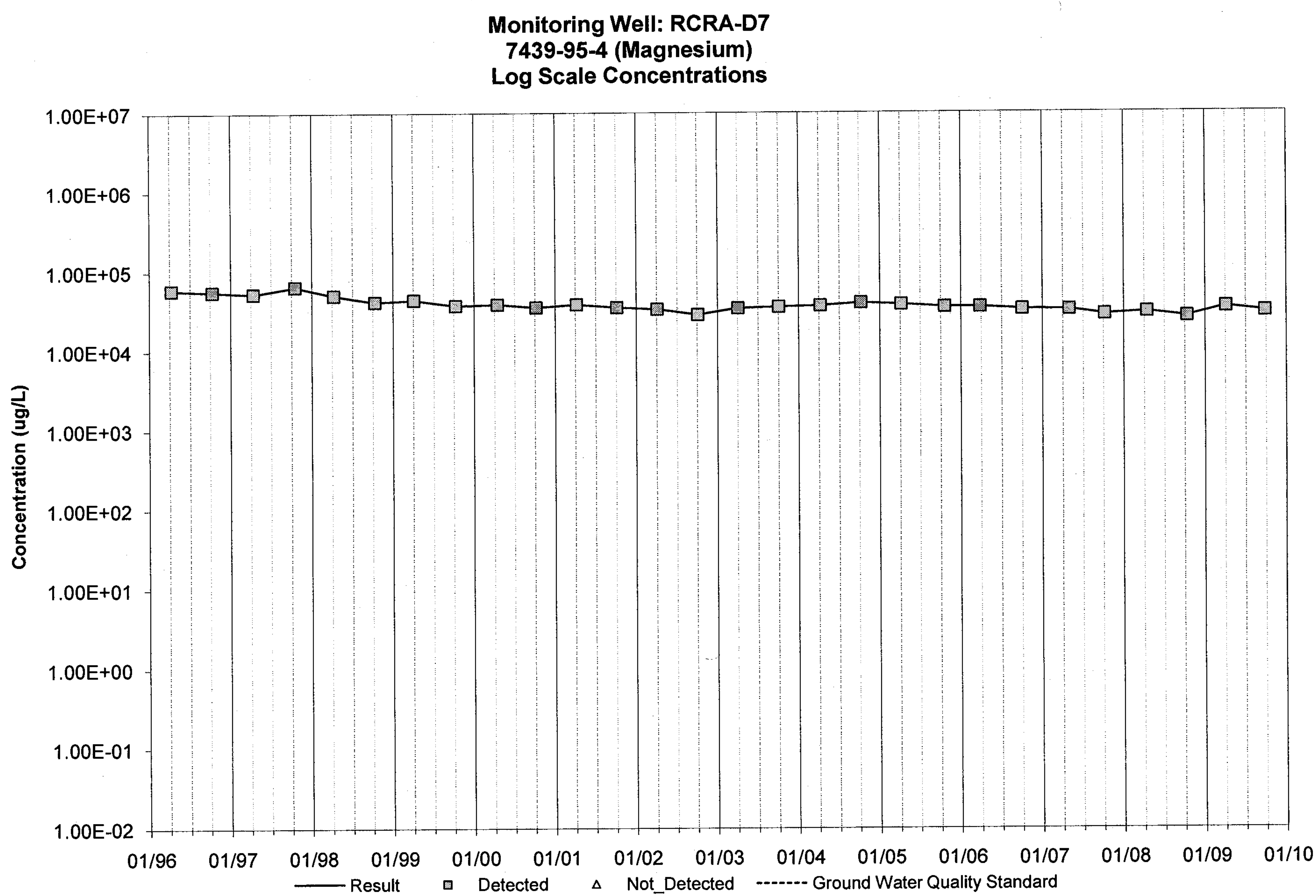
Monitoring Well: RCRA-D4
7439-95-4 (Magnesium)
Log Scale Concentrations




Monitoring Well: RCRA-D5
7439-95-4 (Magnesium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

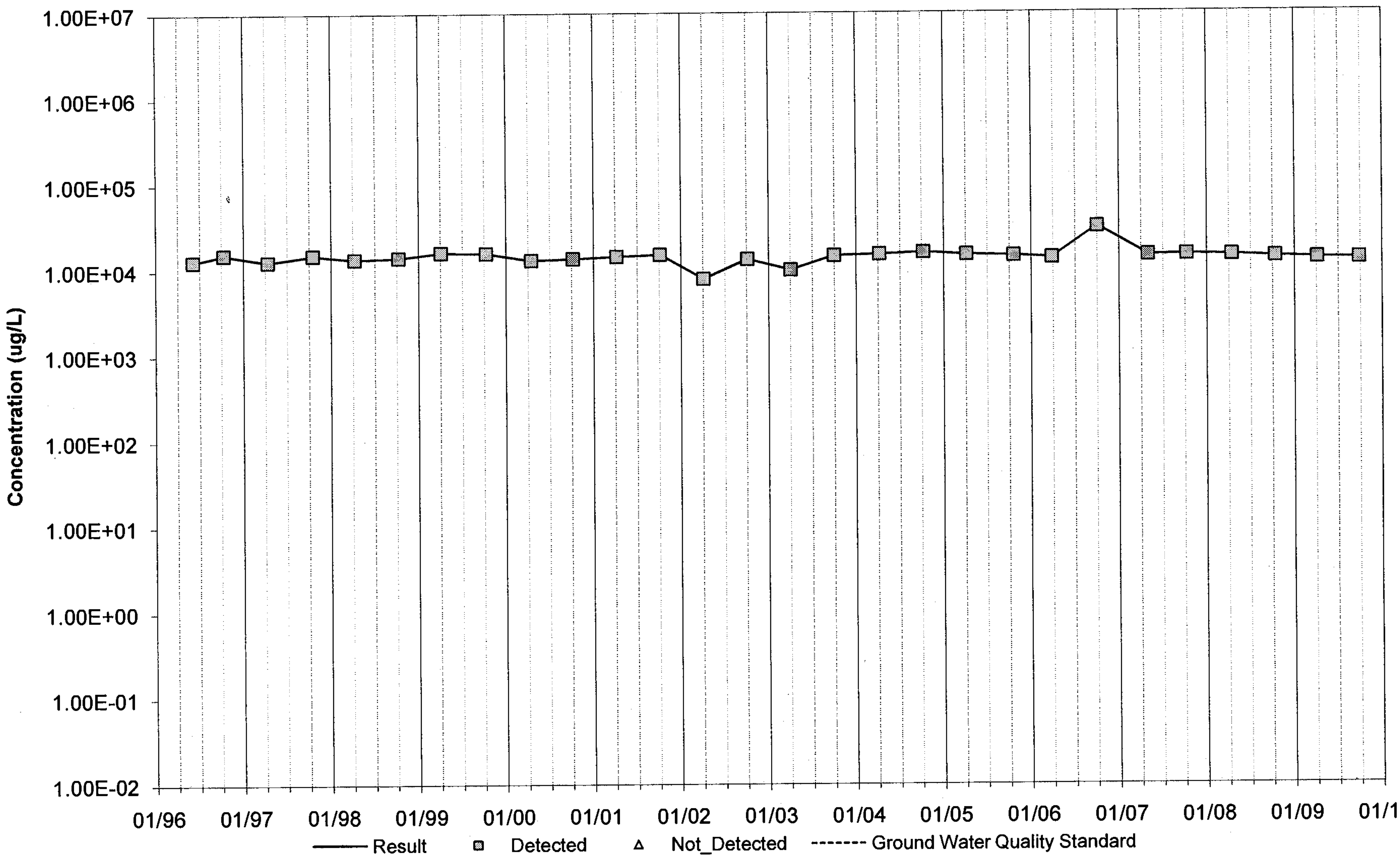
Monitoring Well: RCRA-D6
7439-95-4 (Magnesium)
Log Scale Concentrations



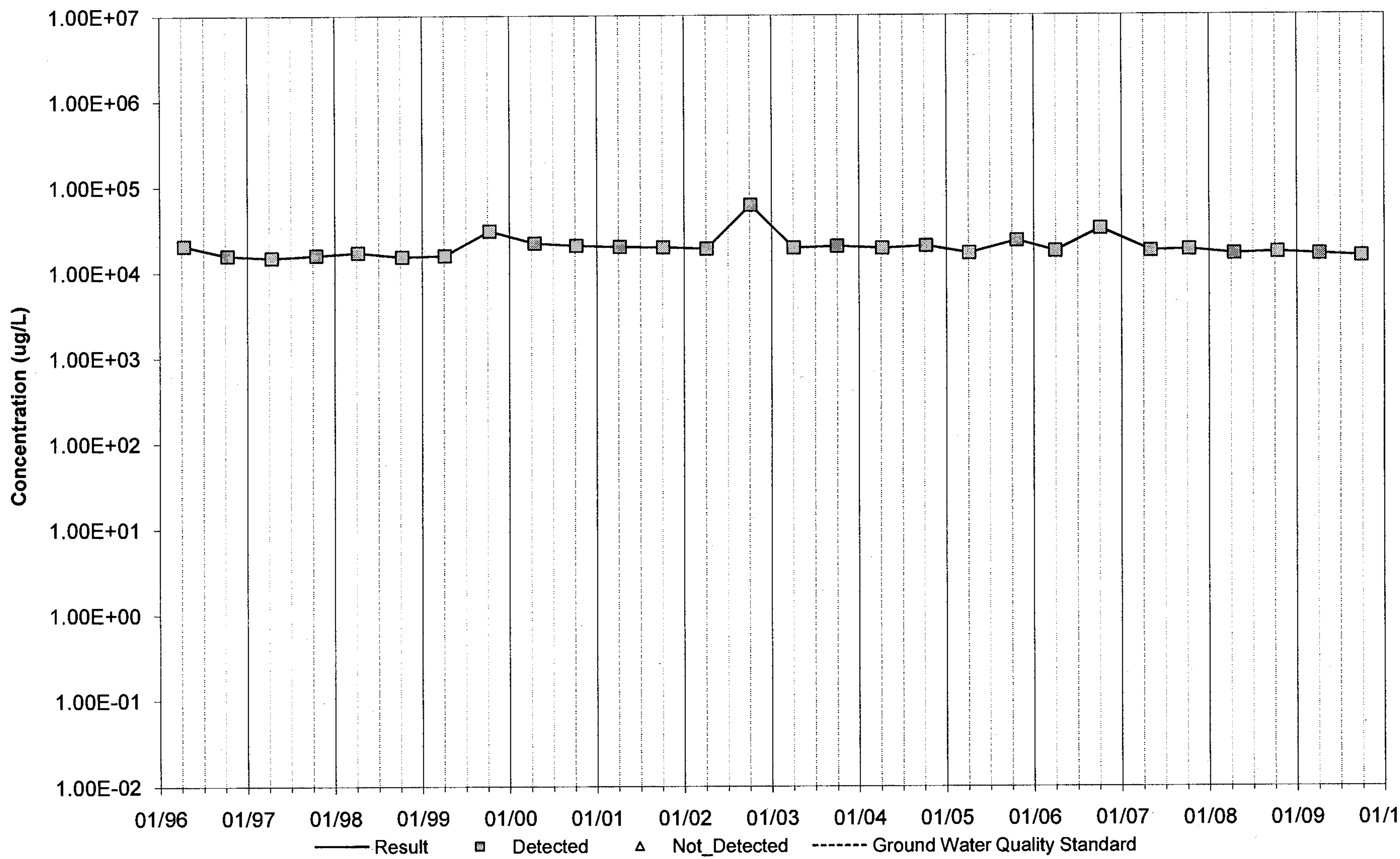


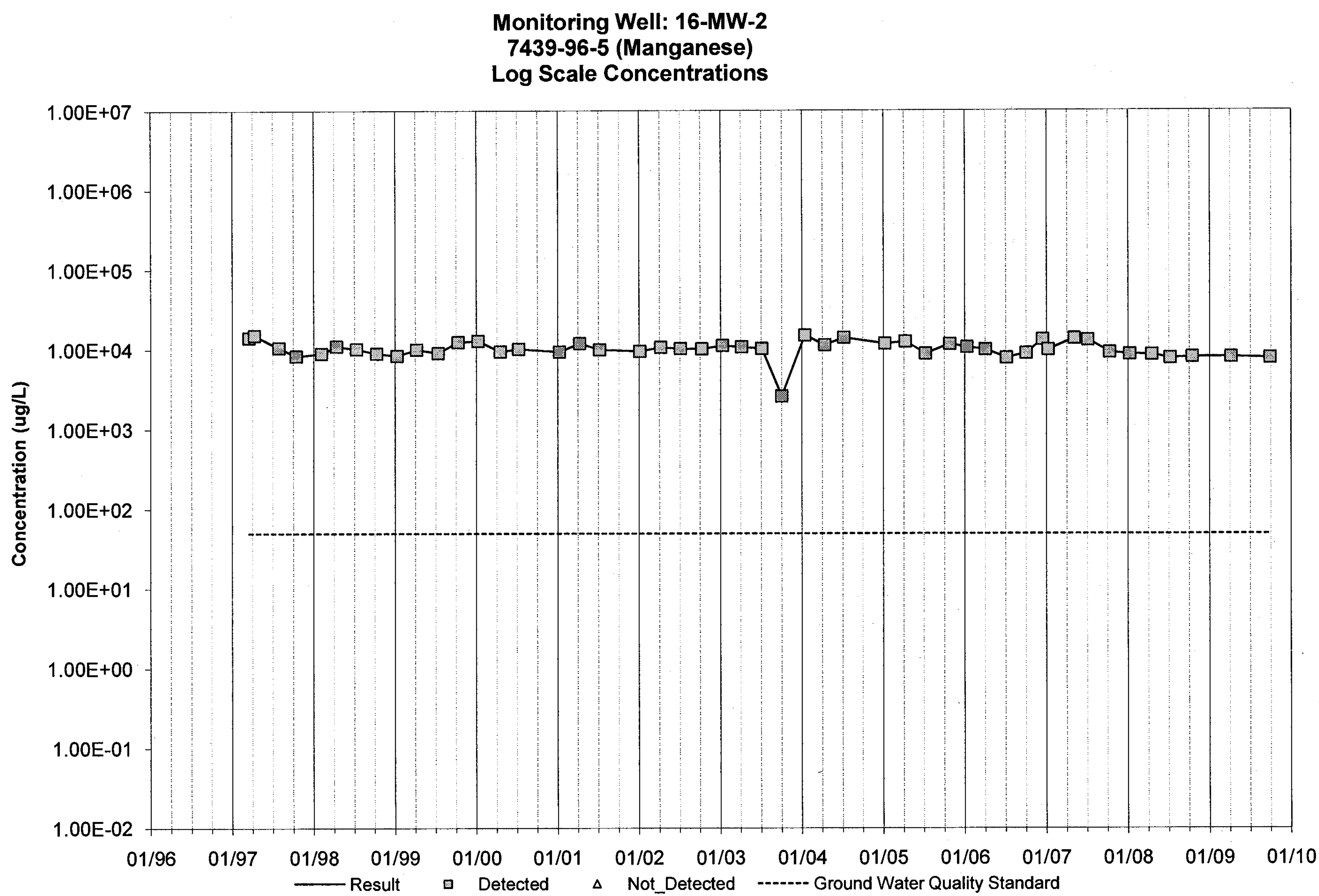
Monitoring Well: RCRA-D7
7439-95-4 (Magnesium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D8
7439-95-4 (Magnesium)
Log Scale Concentrations

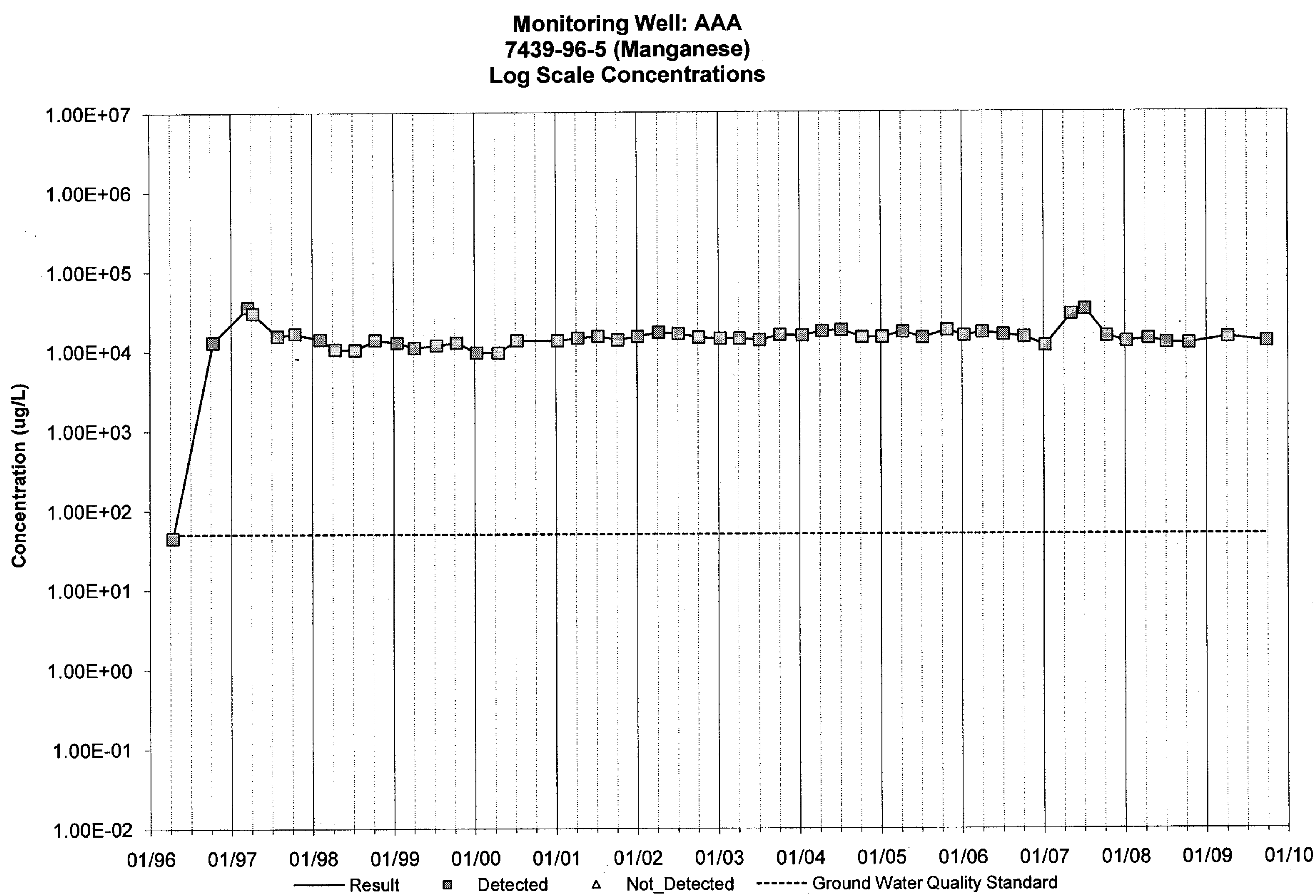


Monitoring Well: RCRA-D9
7439-95-4 (Magnesium)
Log Scale Concentrations



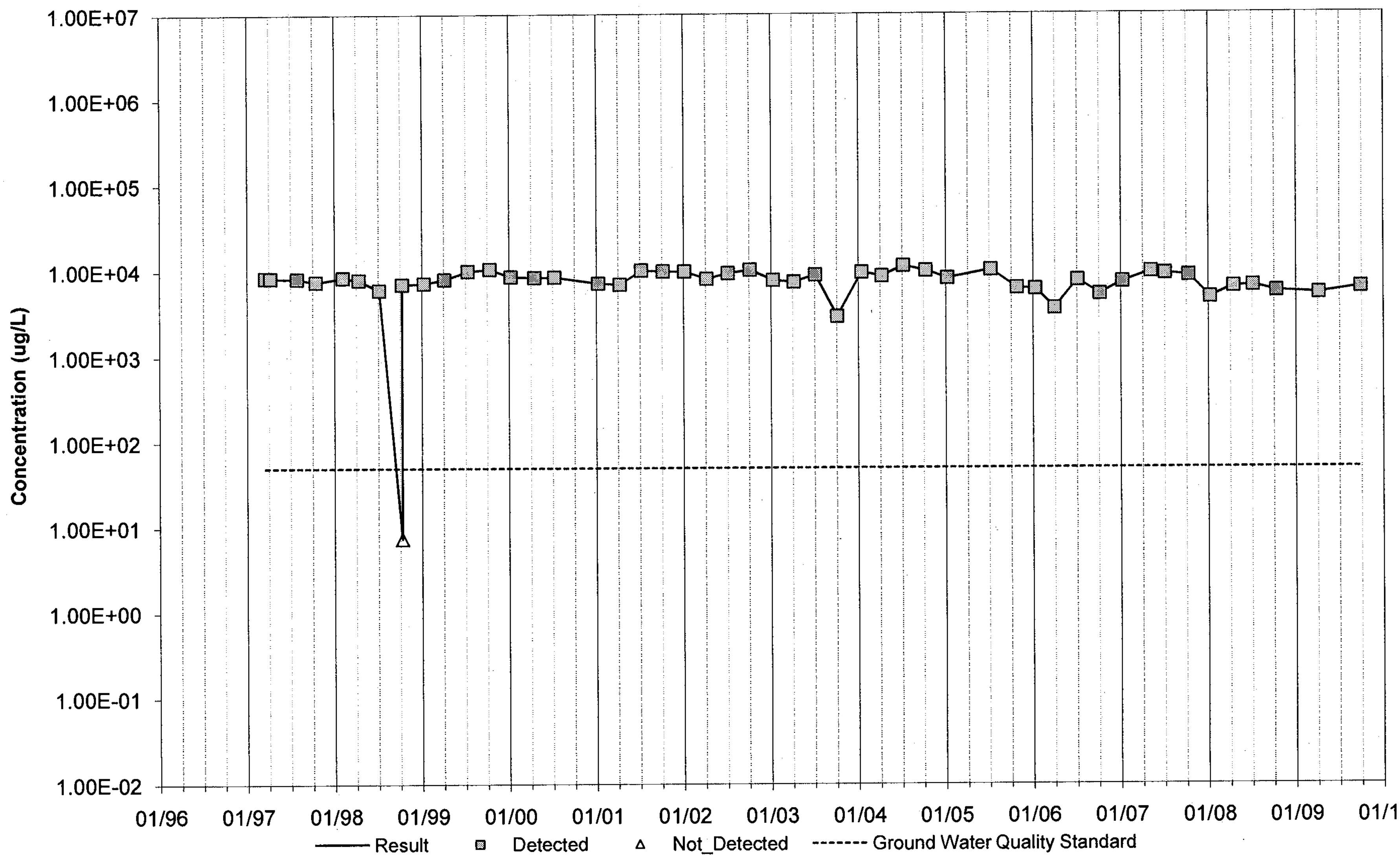


Monitoring Well: 16-MW-2
7439-96-5 (Manganese)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

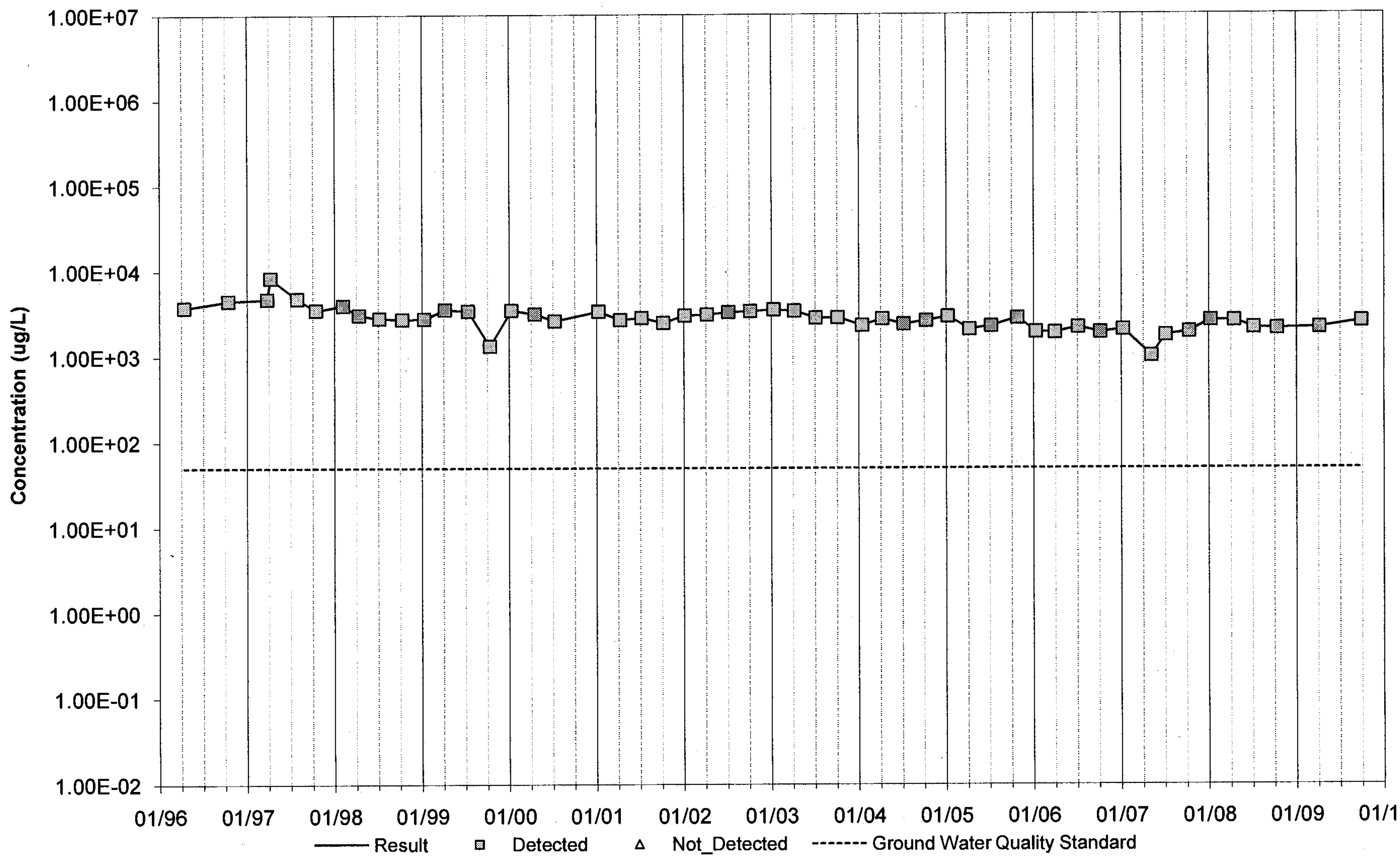


Monitoring Well: AAA
7439-96-5 (Manganese)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

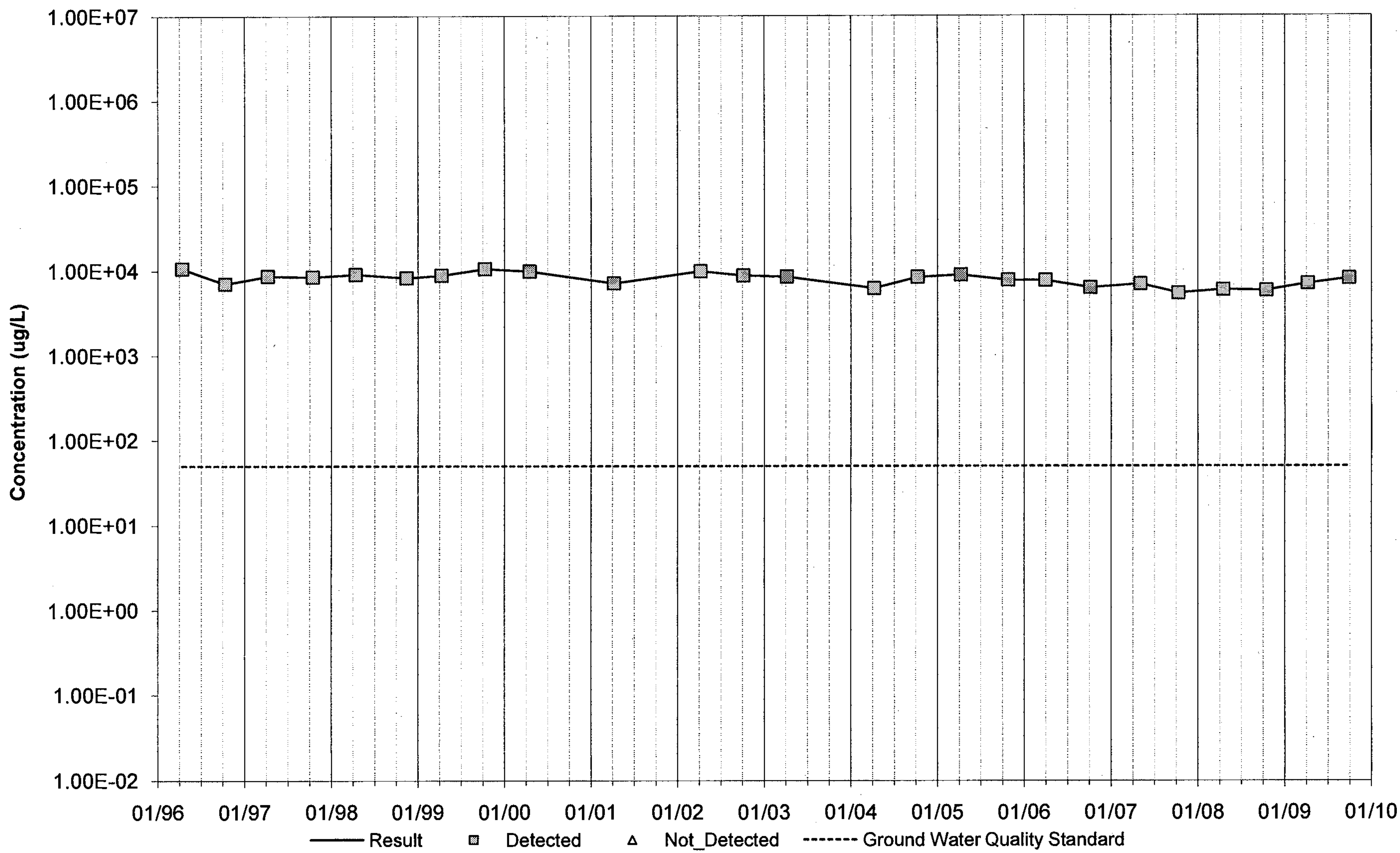
Monitoring Well: CCC-R
7439-96-5 (Manganese)
Log Scale Concentrations



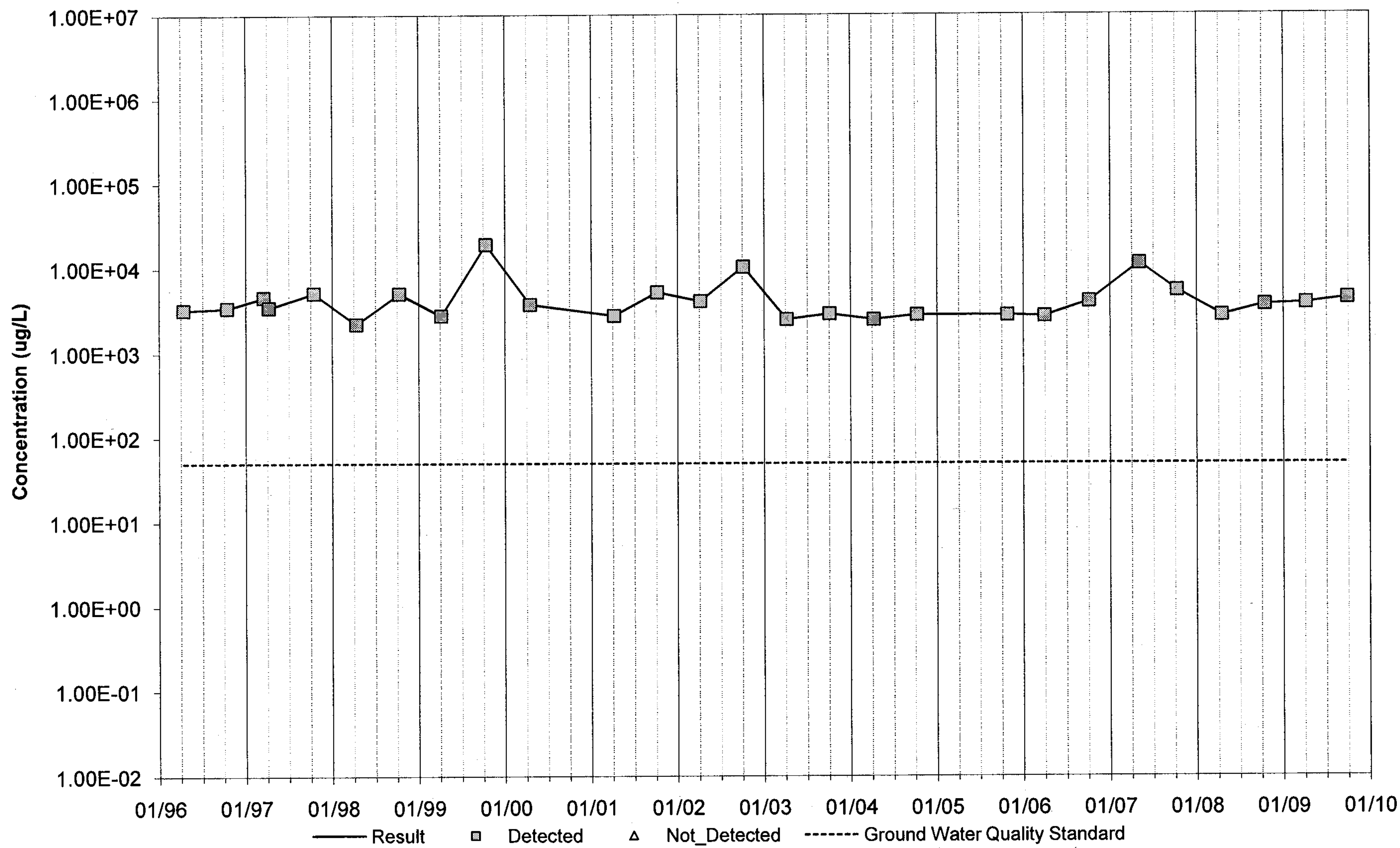
Monitoring Well: EEE-R
7439-96-5 (Manganese)
Log Scale Concentrations



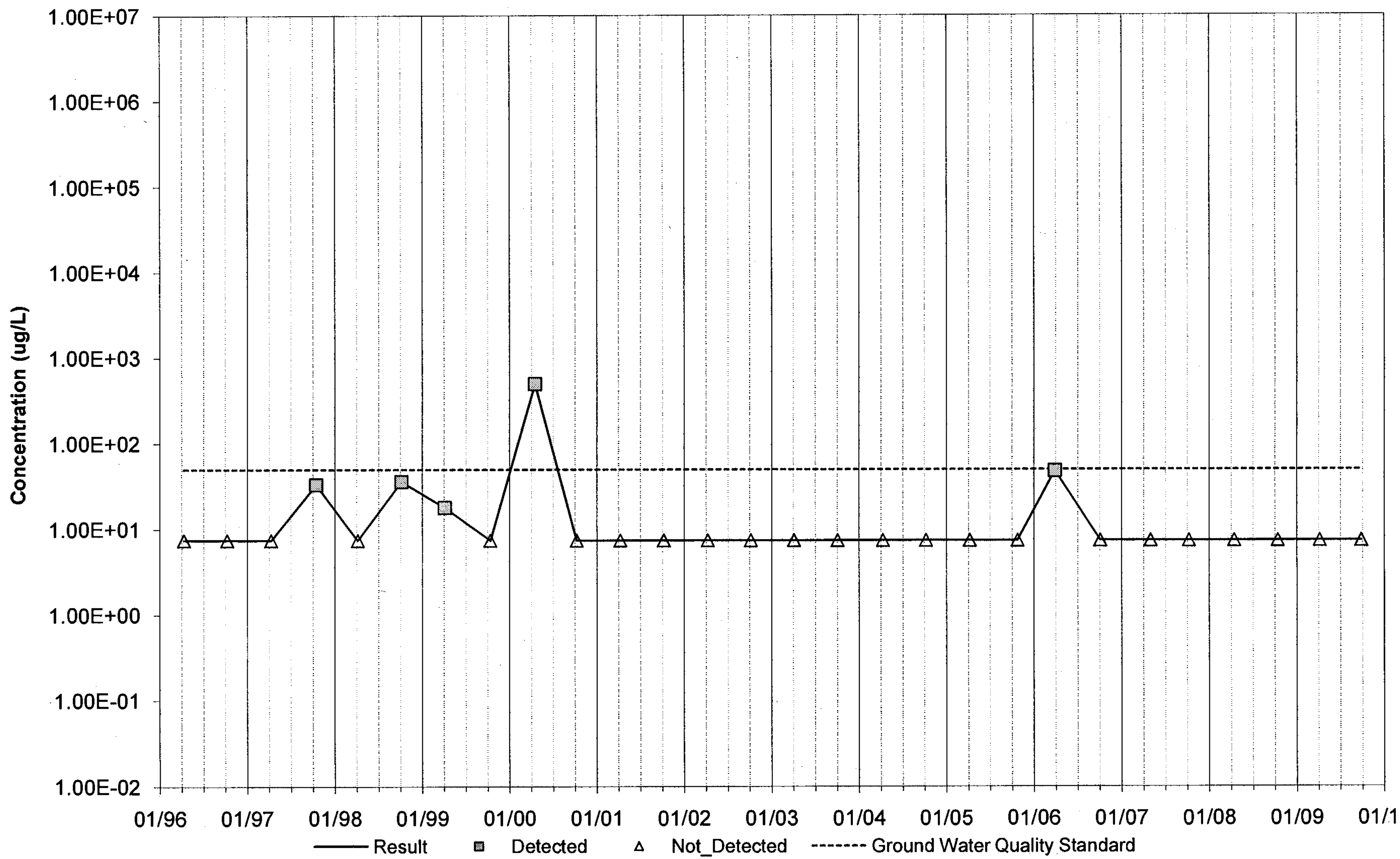
Monitoring Well: III
7439-96-5 (Manganese)
Log Scale Concentrations

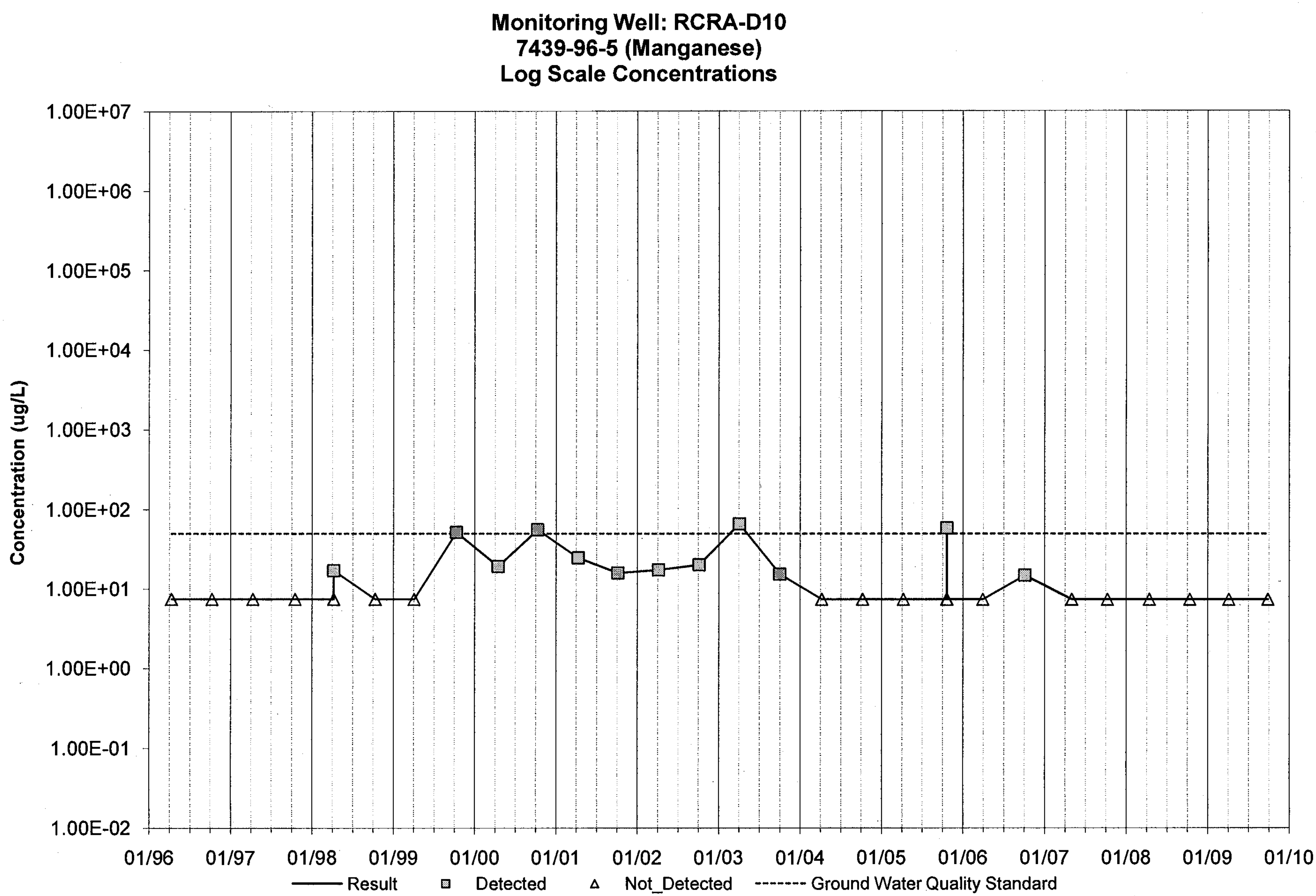


Monitoring Well: KKK
7439-96-5 (Manganese)
Log Scale Concentrations

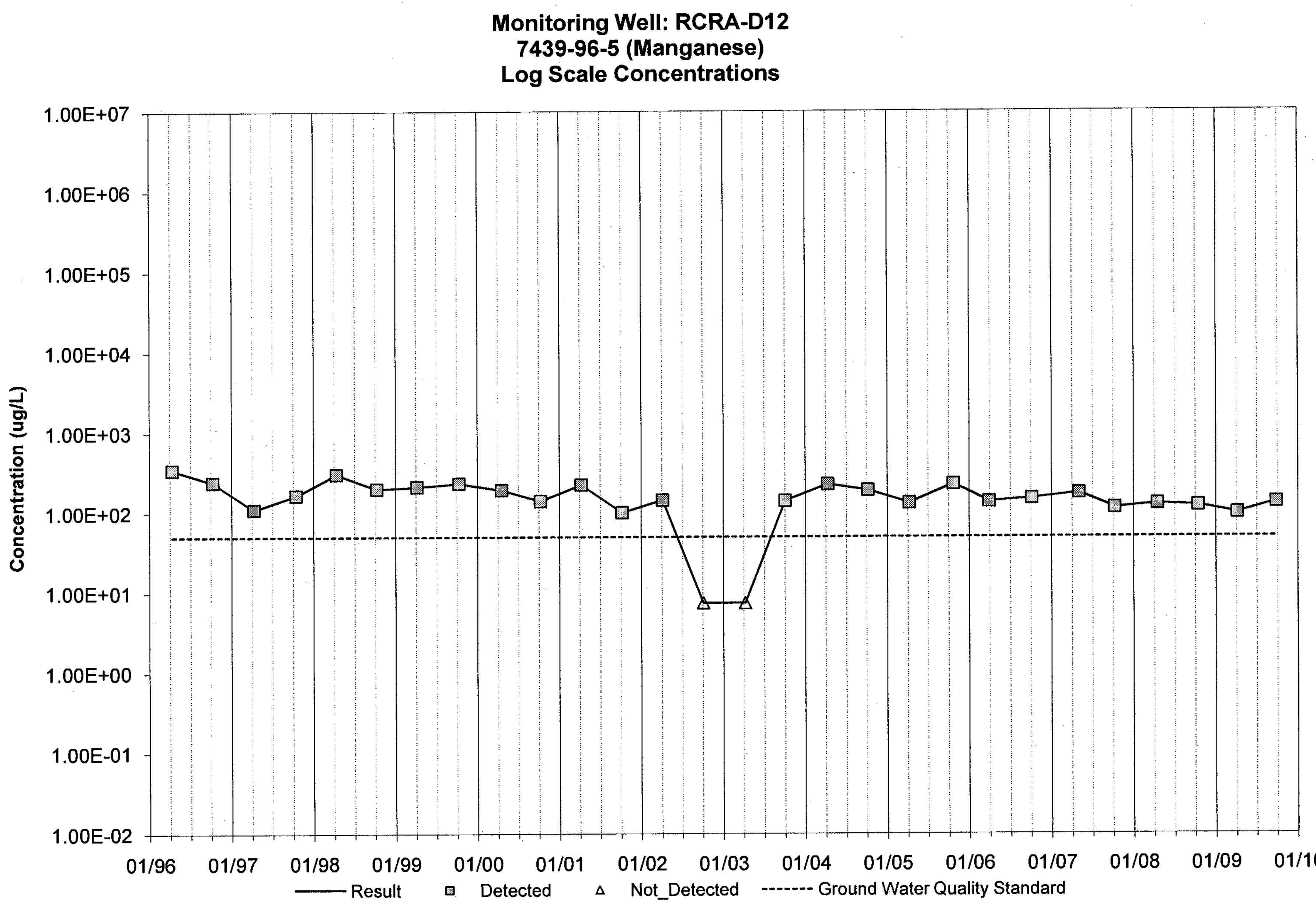


Monitoring Well: RCRA-D1
7439-96-5 (Manganese)
Log Scale Concentrations

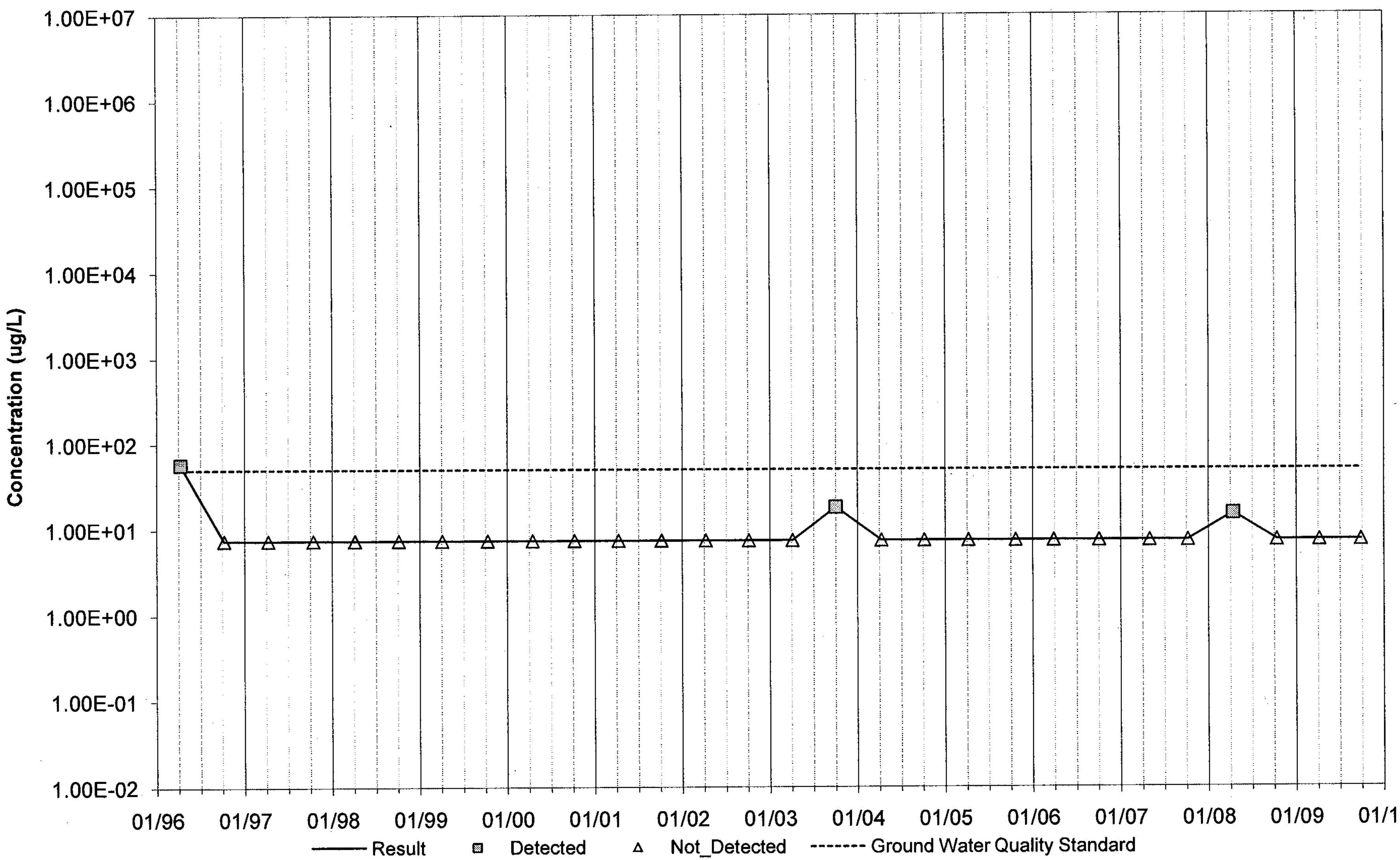




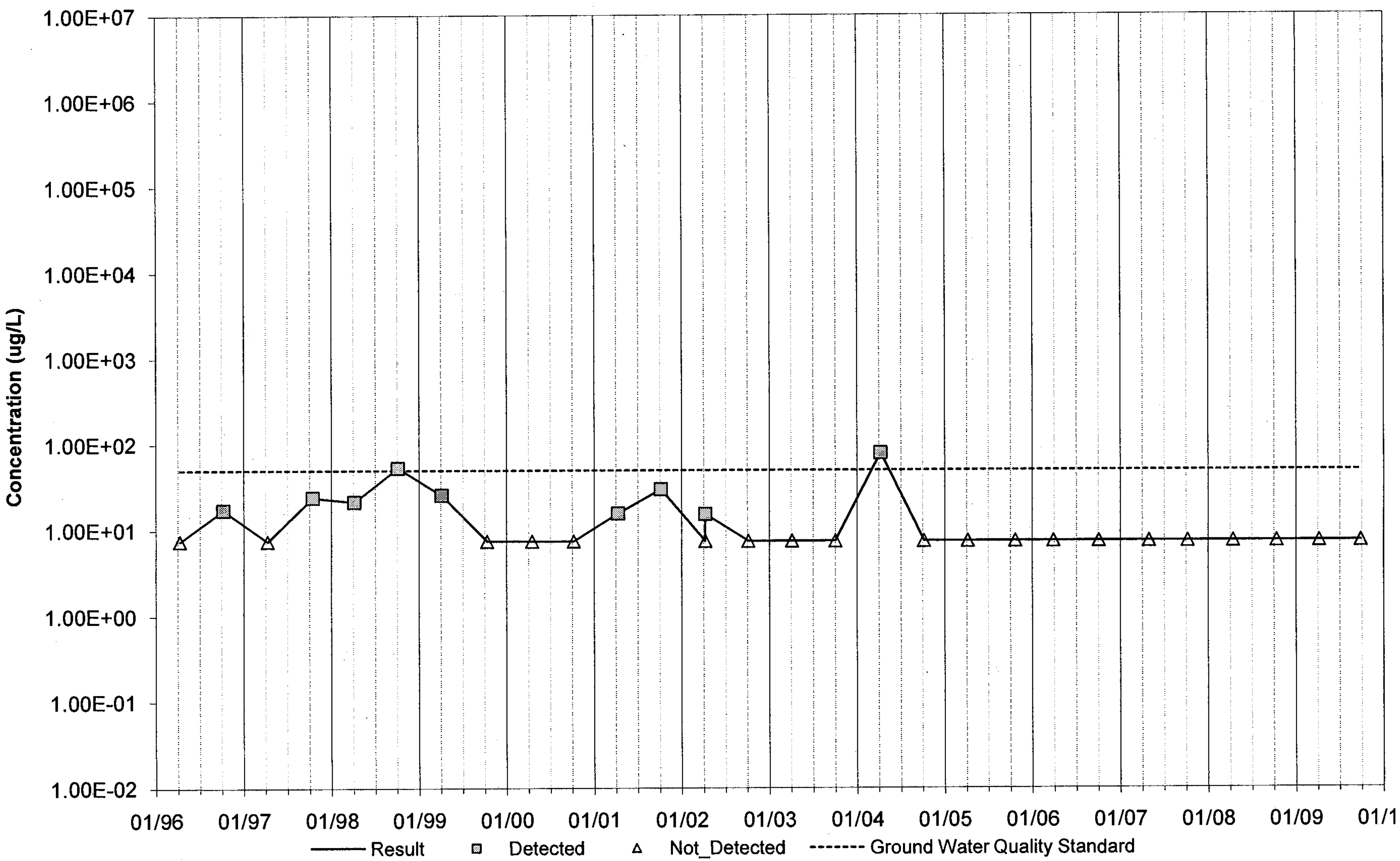
Monitoring Well: RCRA-D10
7439-96-5 (Manganese)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: RCRA-D12
7439-96-5 (Manganese)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

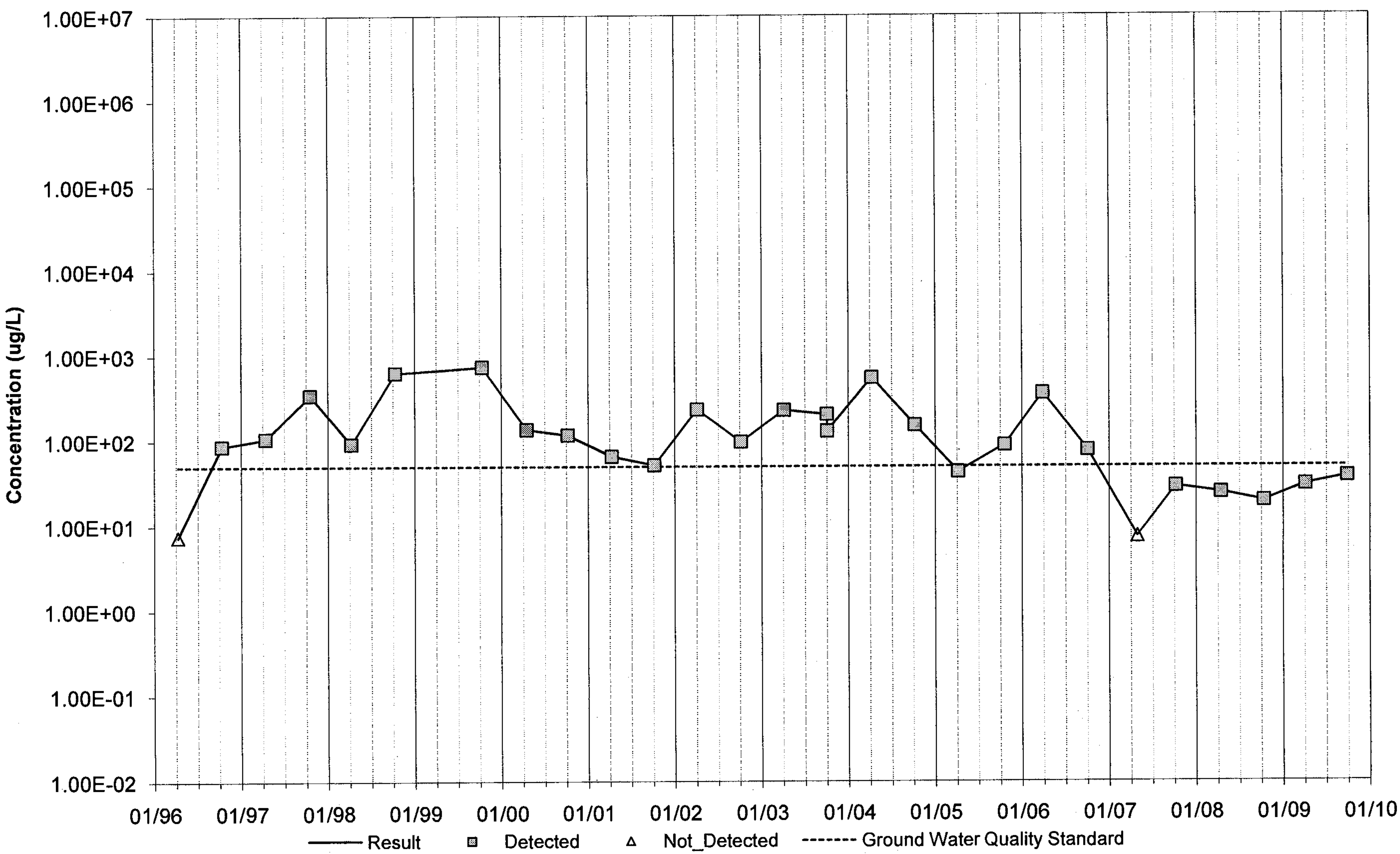
Monitoring Well: RCRA-D3
7439-96-5 (Manganese)
Log Scale Concentrations

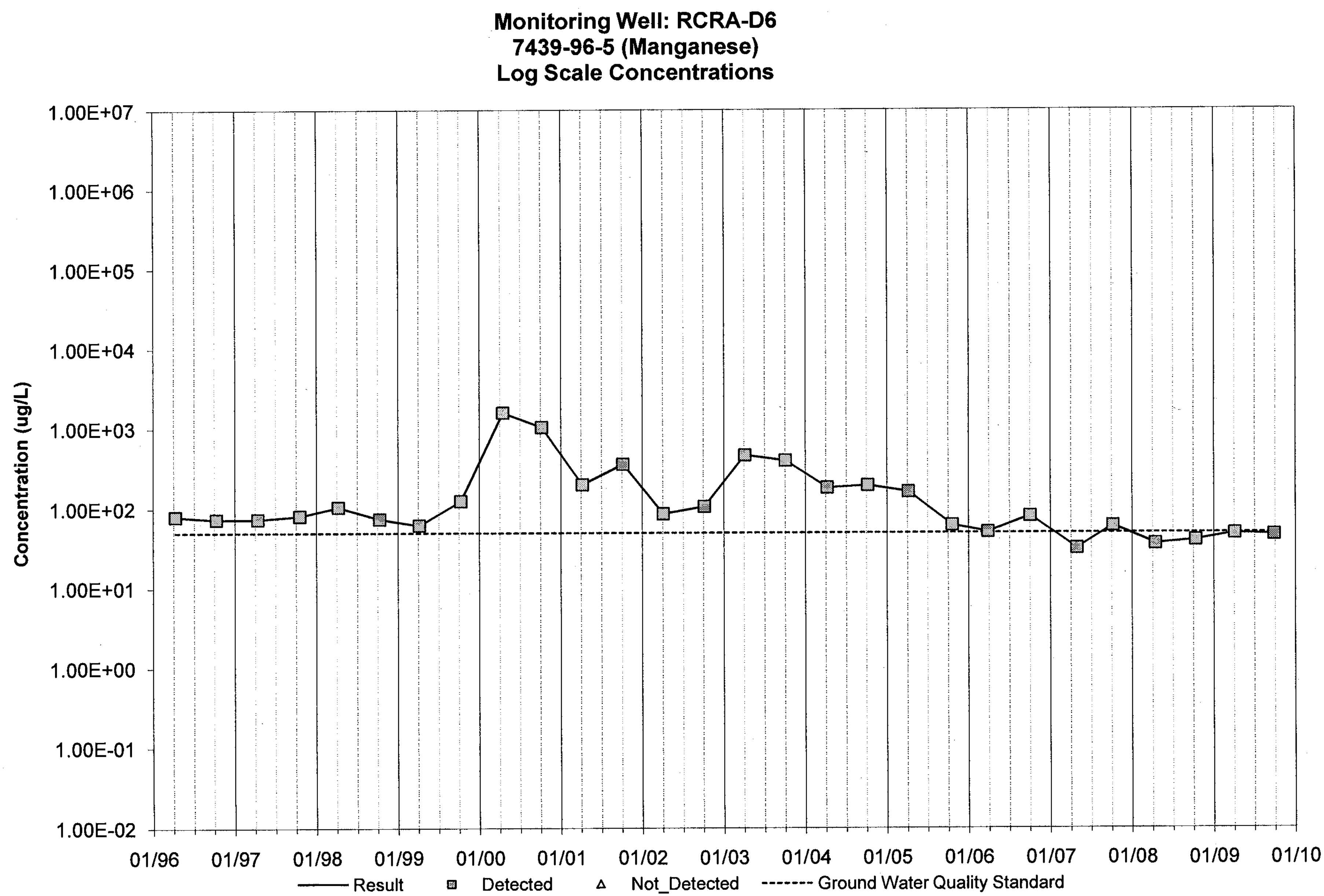


Monitoring Well: RCRA-D4
7439-96-5 (Manganese)
Log Scale Concentrations



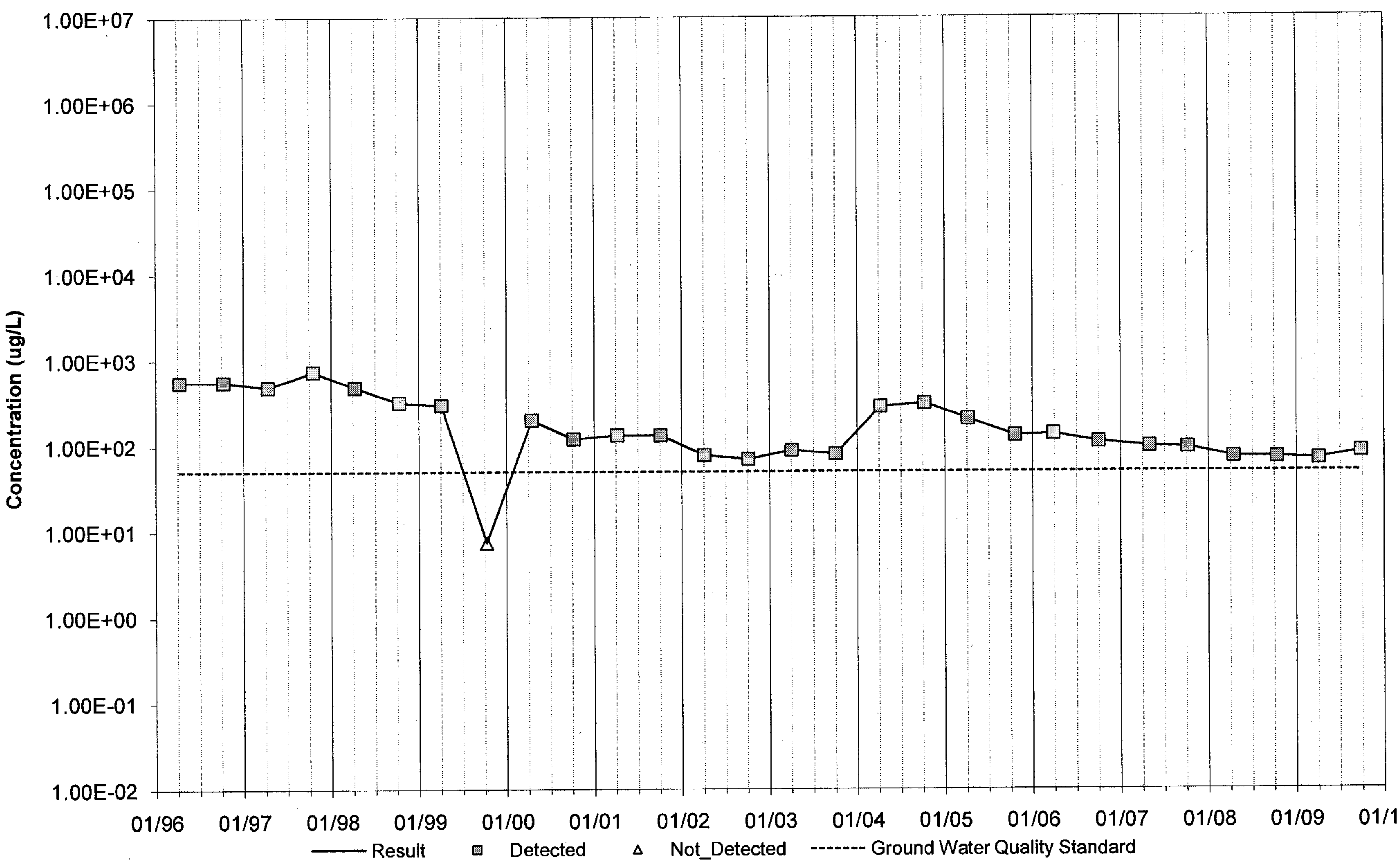
Monitoring Well: RCRA-D5
7439-96-5 (Manganese)
Log Scale Concentrations



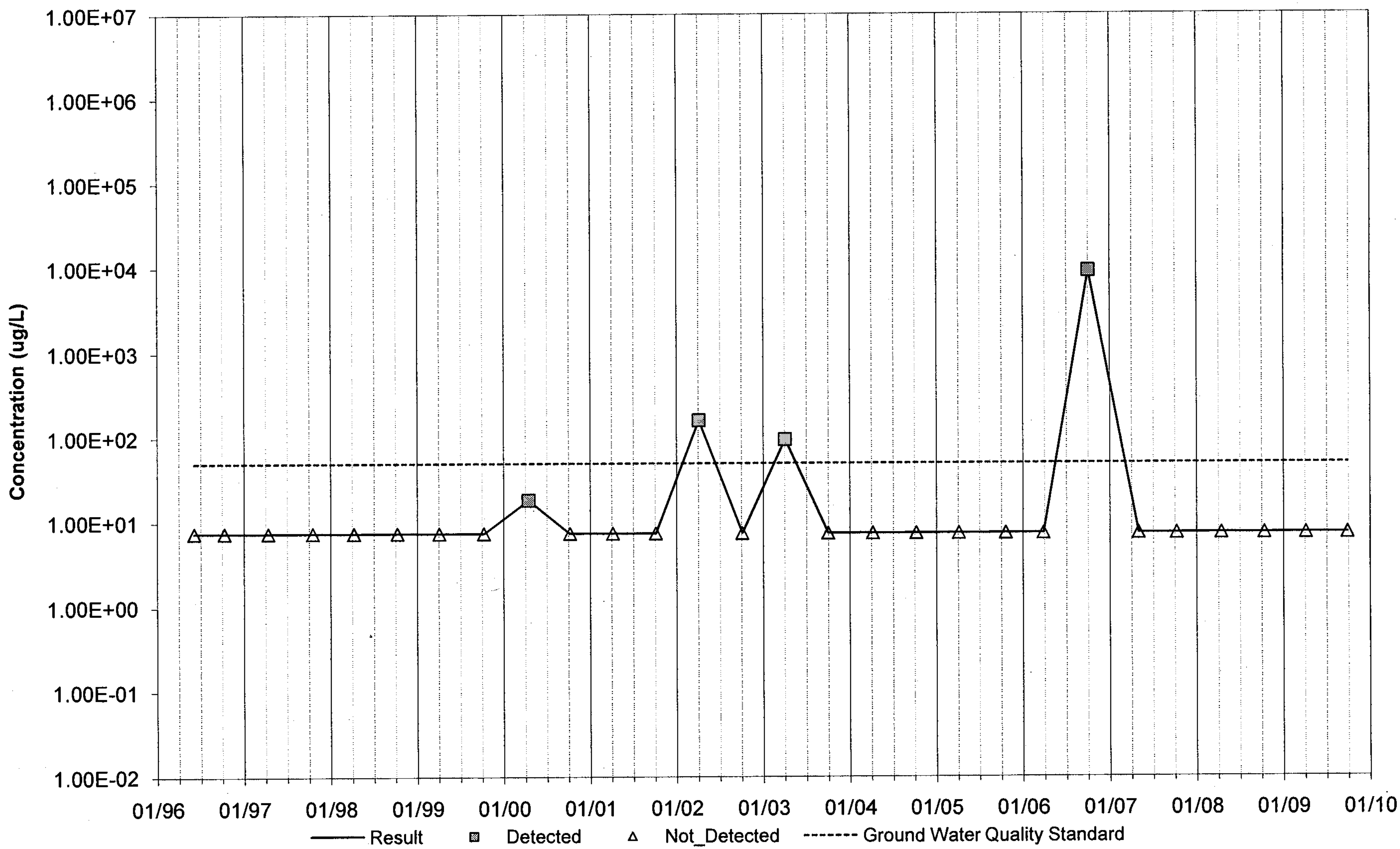


Monitoring Well: RCRA-D6
7439-96-5 (Manganese)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

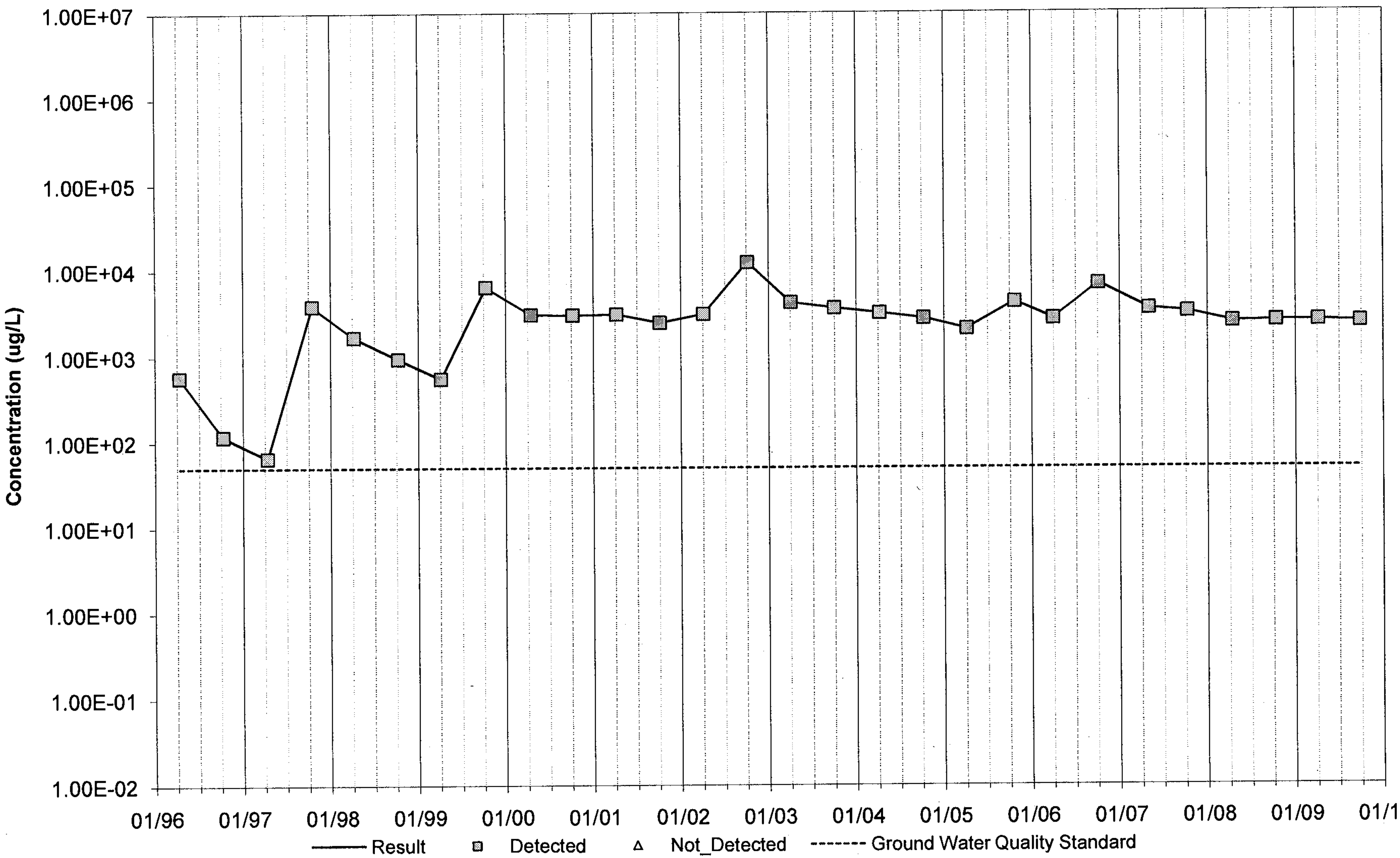
Monitoring Well: RCRA-D7
7439-96-5 (Manganese)
Log Scale Concentrations

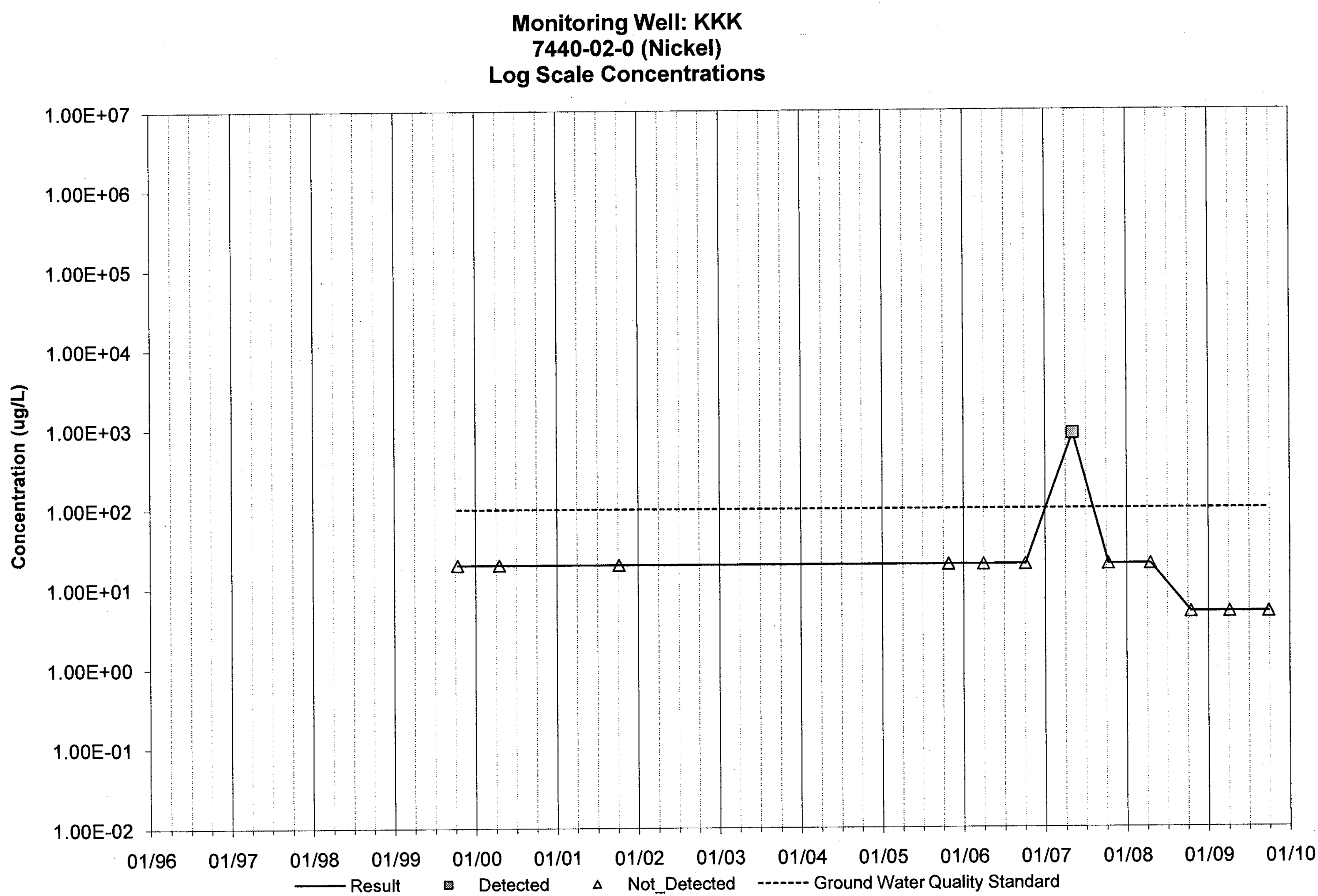


Monitoring Well: RCRA-D8
7439-96-5 (Manganese)
Log Scale Concentrations

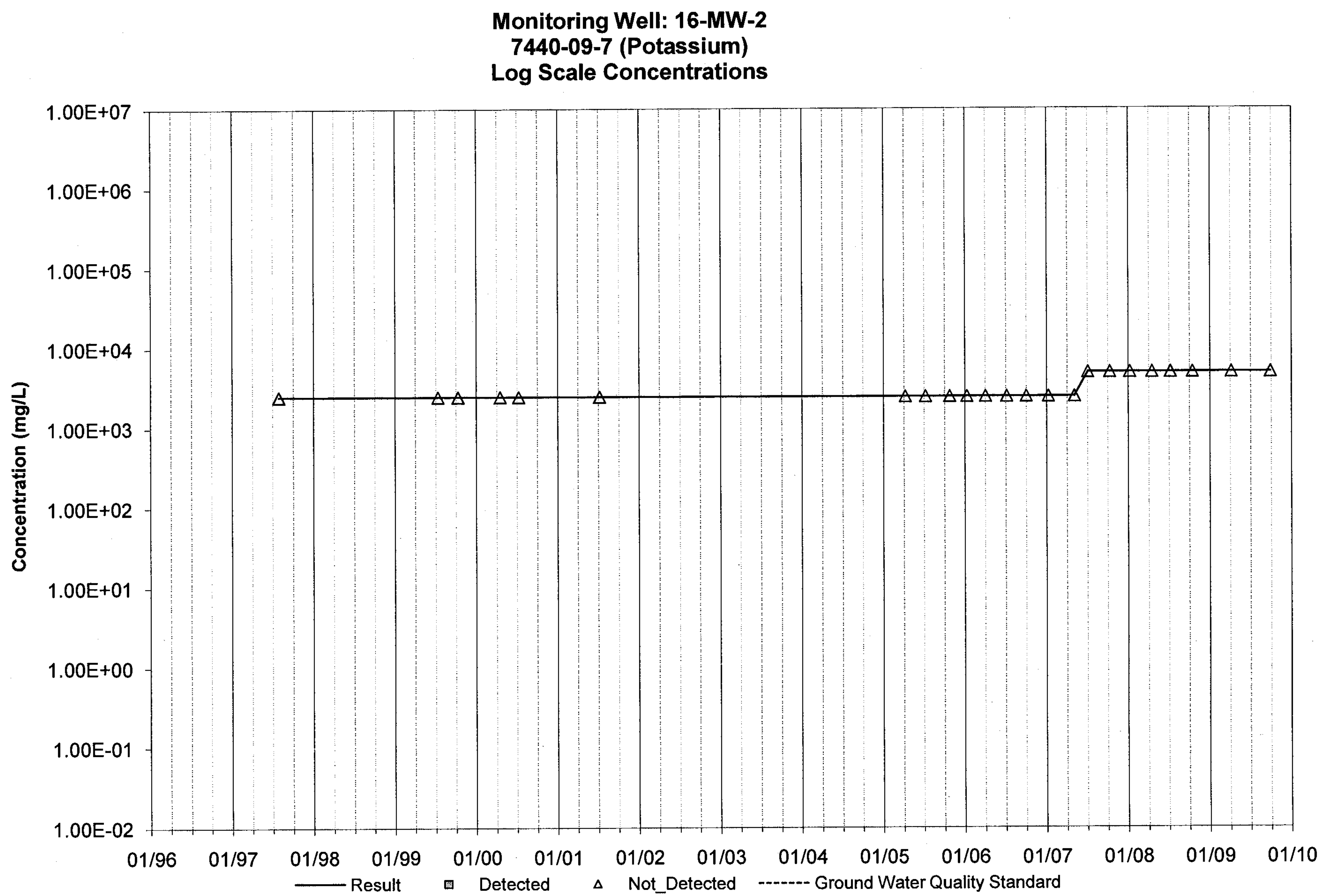


Monitoring Well: RCRA-D9
7439-96-5 (Manganese)
Log Scale Concentrations

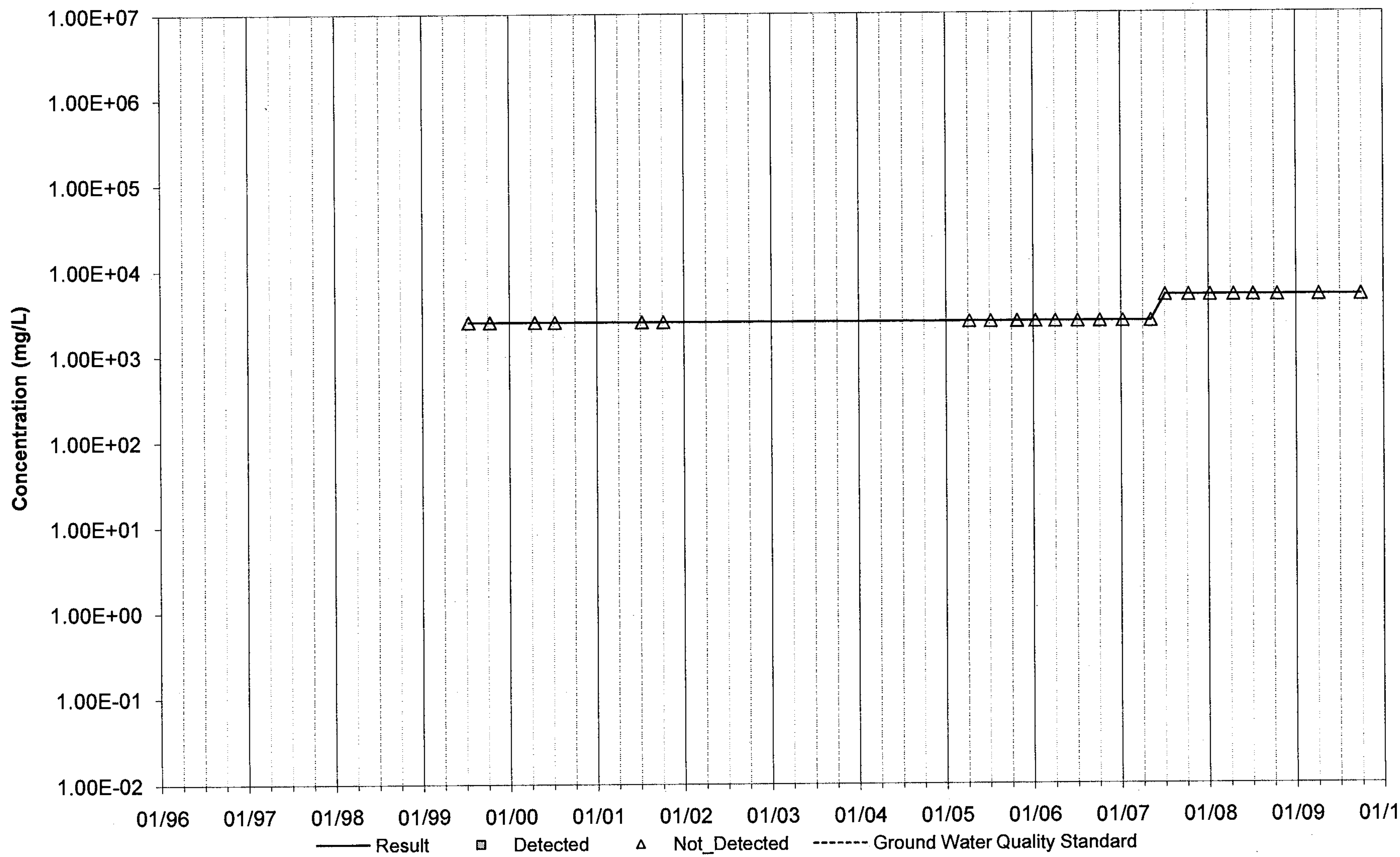




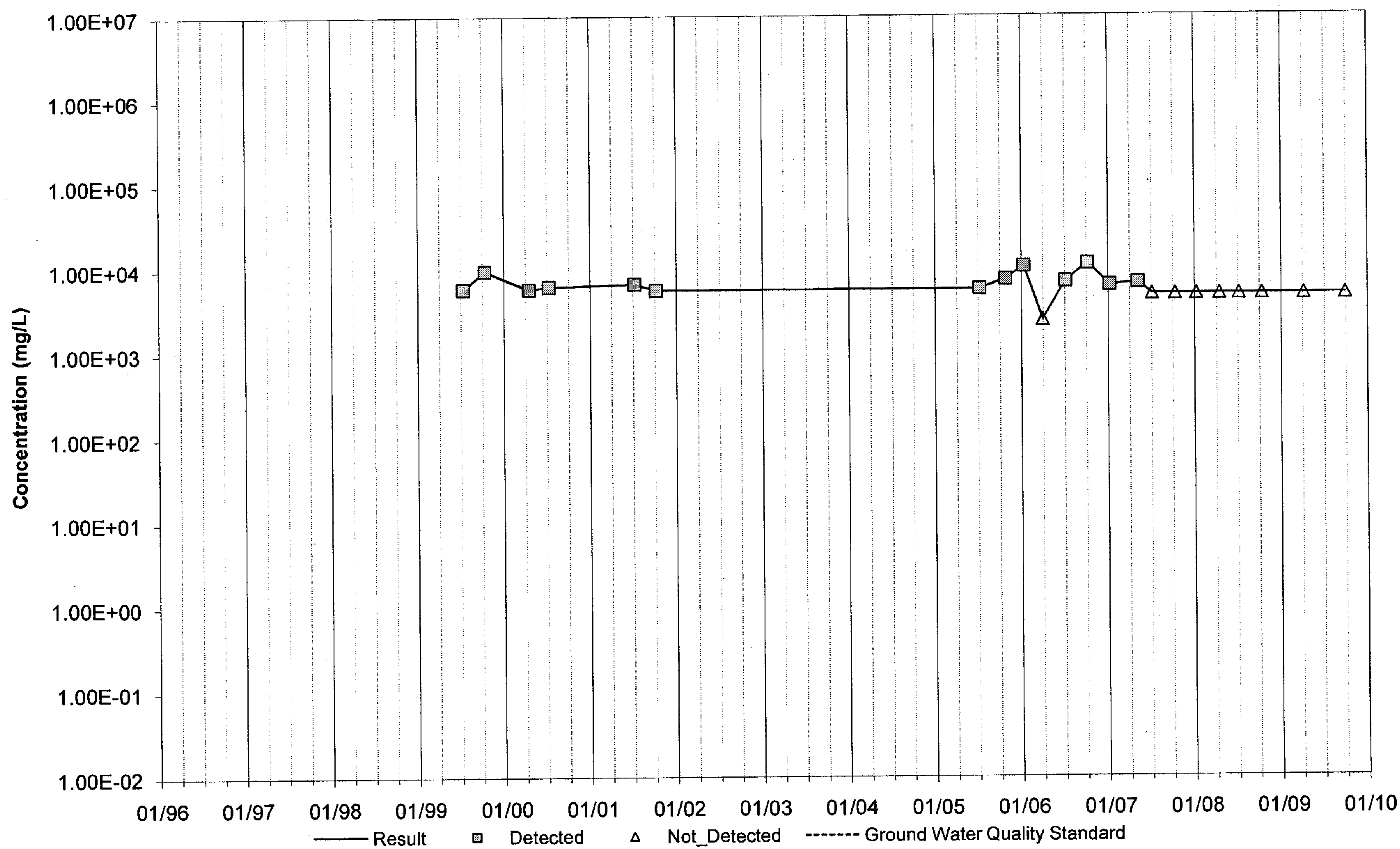
Monitoring Well: KKK
7440-02-0 (Nickel)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

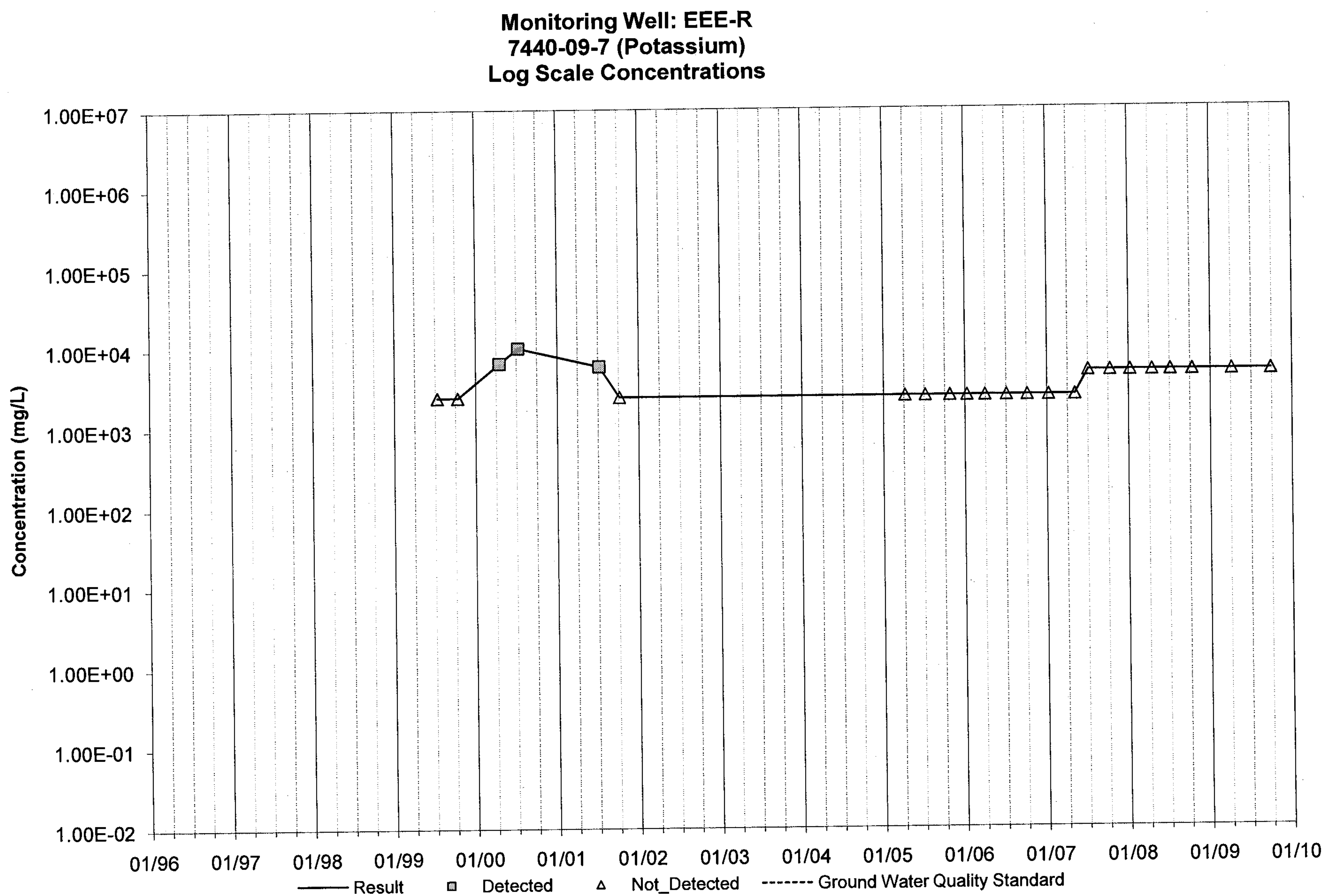

Monitoring Well: 16-MW-2
7440-09-7 (Potassium)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: AAA
7440-09-7 (Potassium)
Log Scale Concentrations

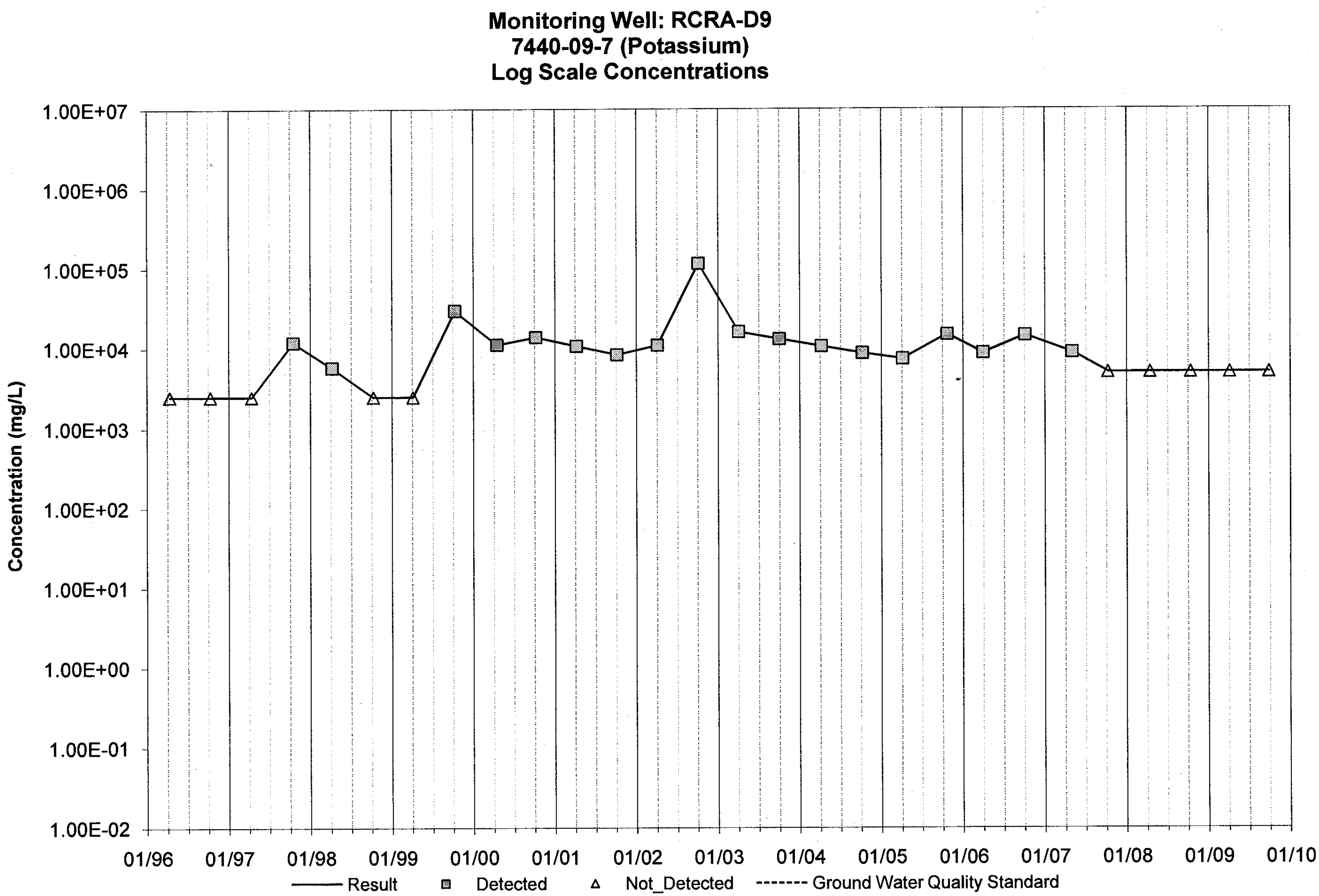


Monitoring Well: CCC-R
7440-09-7 (Potassium)
Log Scale Concentrations



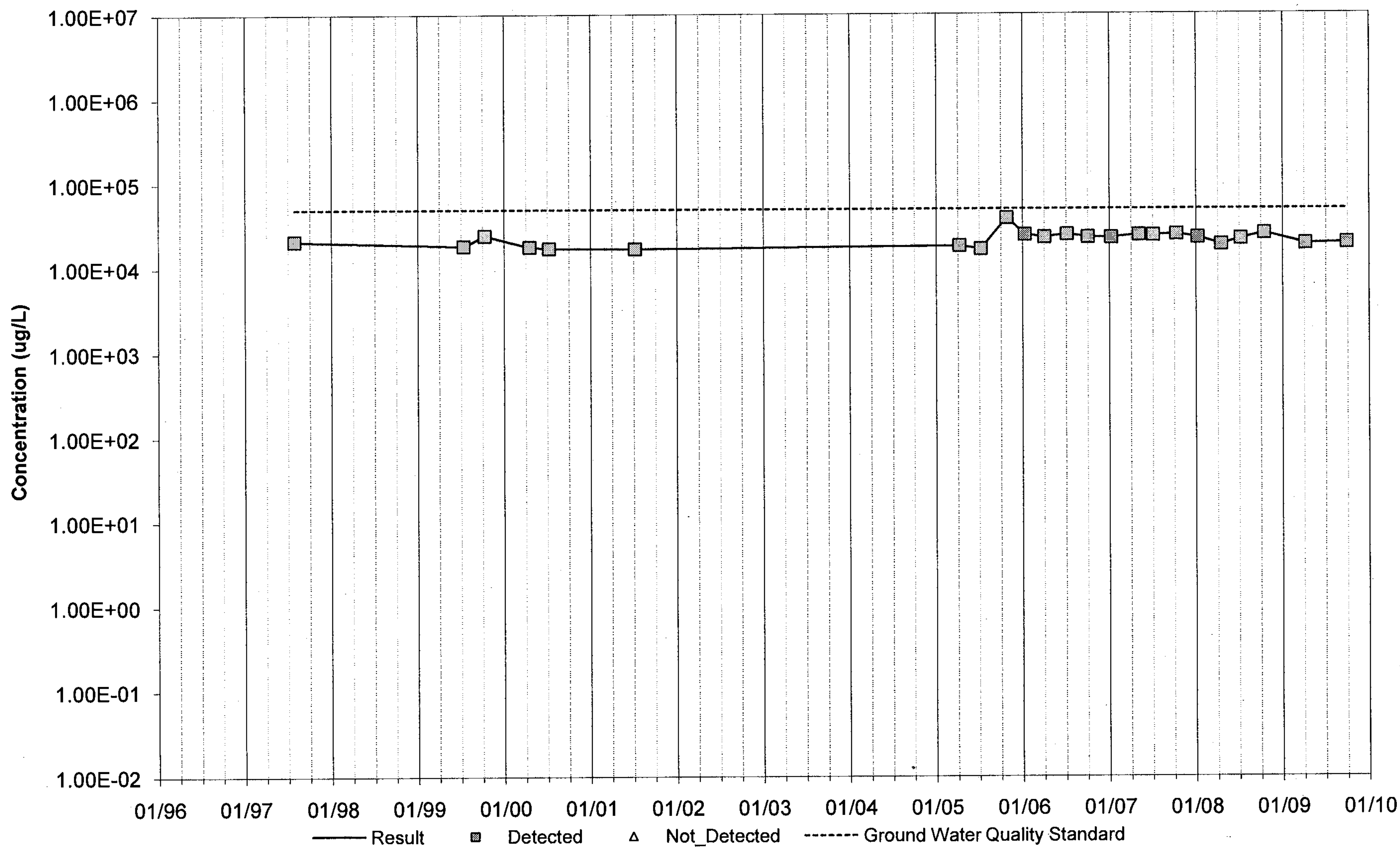


Monitoring Well: EEE-R
7440-09-7 (Potassium)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

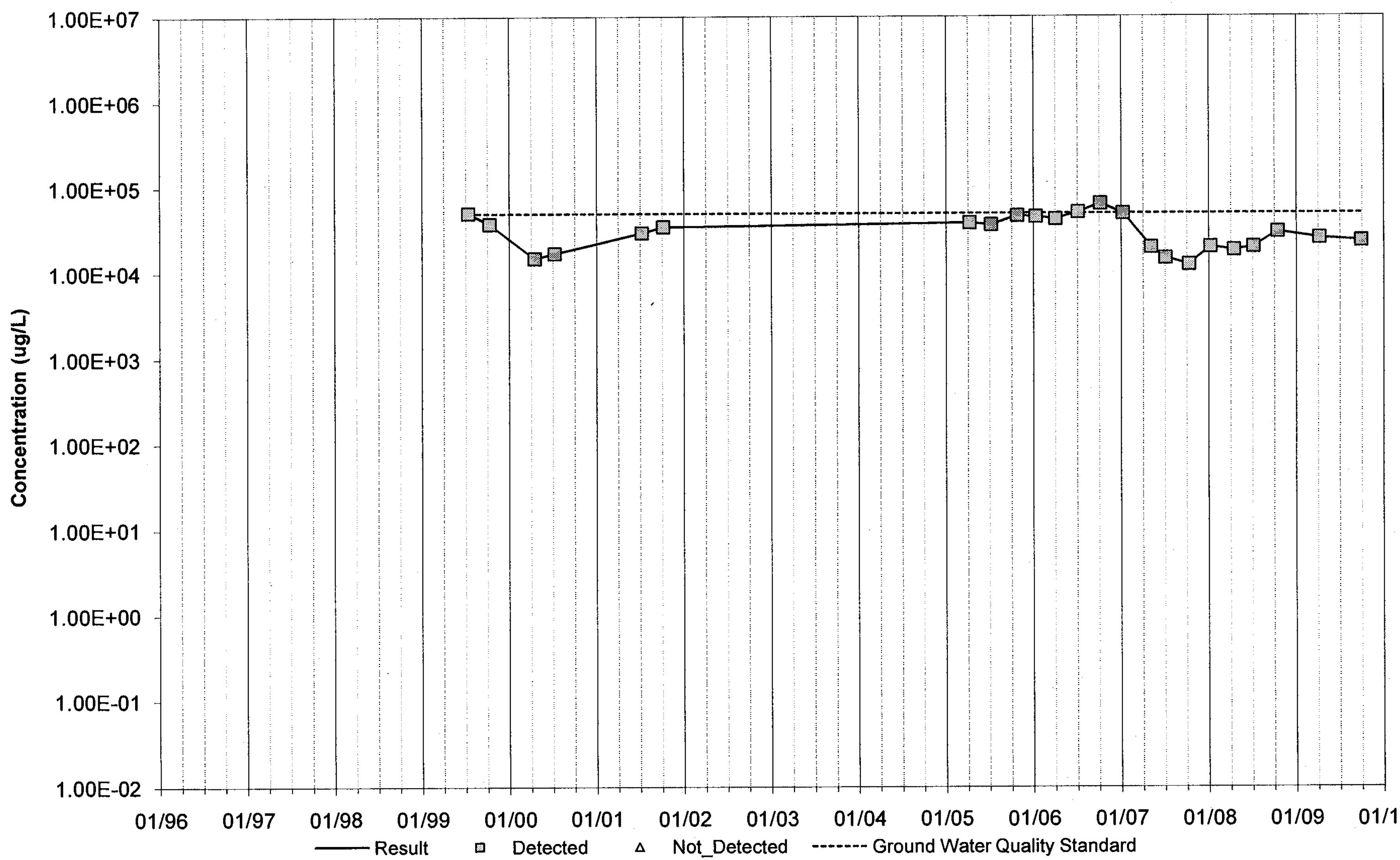


Monitoring Well: RCRA-D9
7440-09-7 (Potassium)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

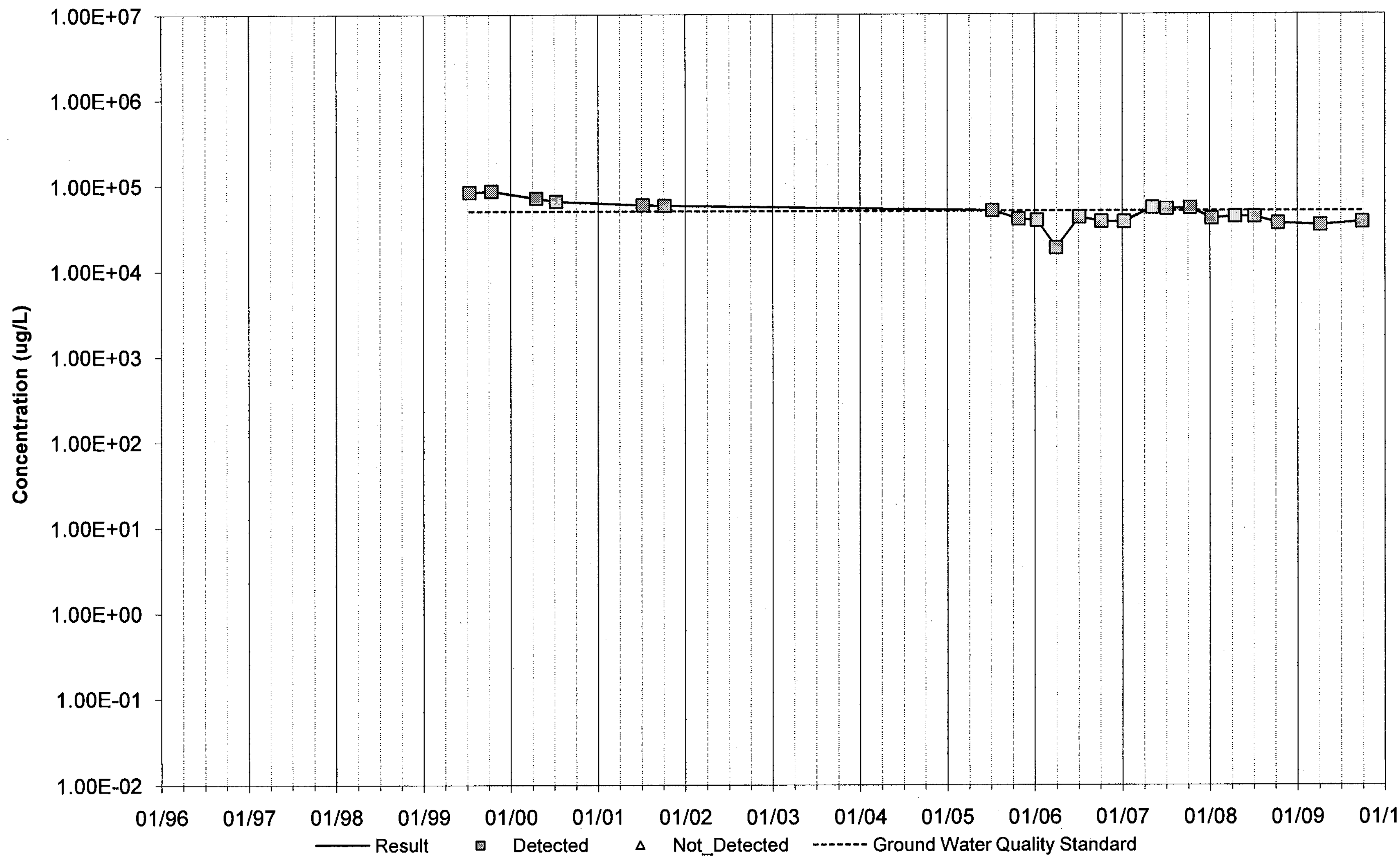
Monitoring Well: 16-MW-2
7440-23-5 (Sodium)
Log Scale Concentrations



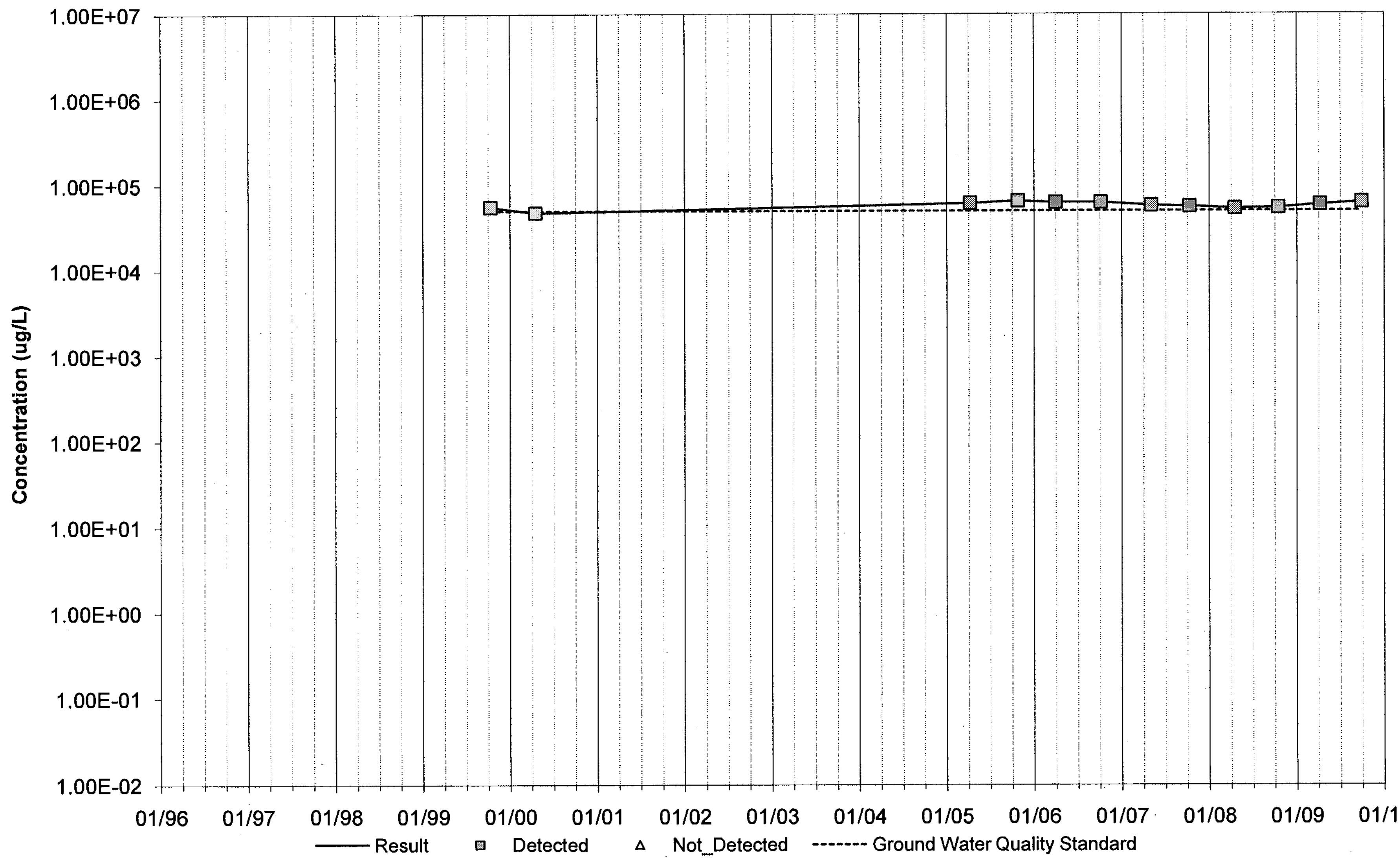
Monitoring Well: AAA
7440-23-5 (Sodium)
Log Scale Concentrations



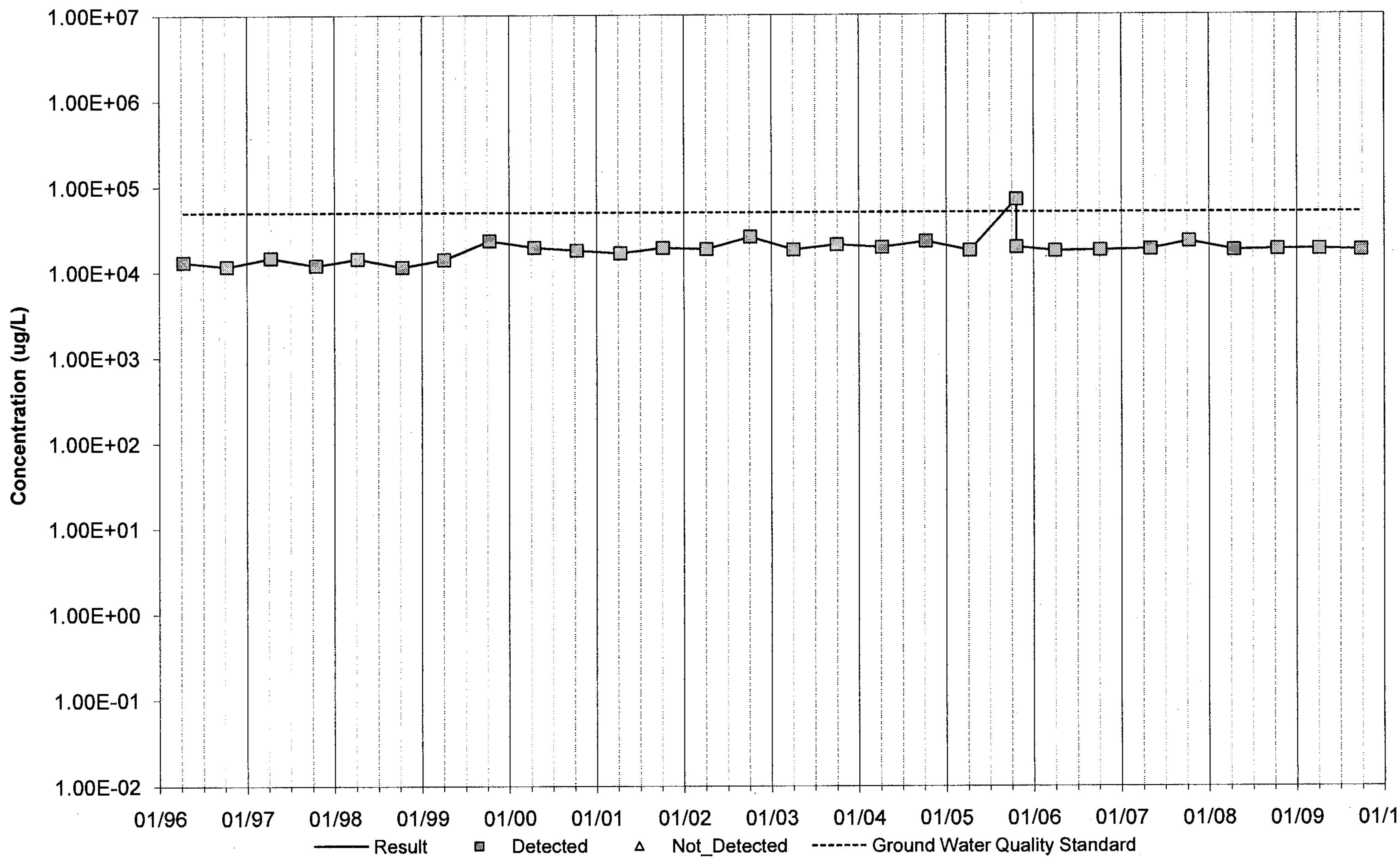
Monitoring Well: CCC-R
7440-23-5 (Sodium)
Log Scale Concentrations

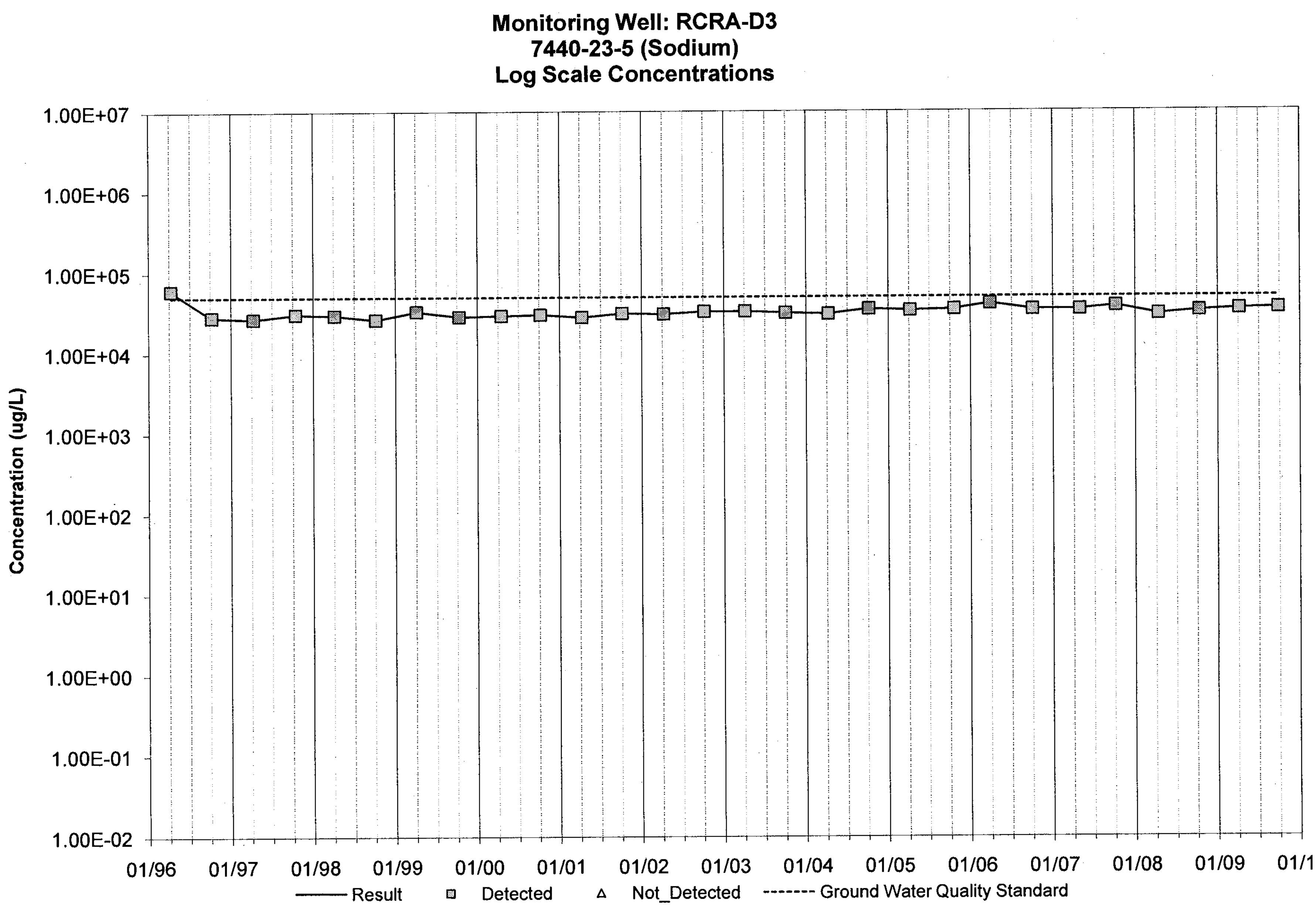


Monitoring Well: III
7440-23-5 (Sodium)
Log Scale Concentrations

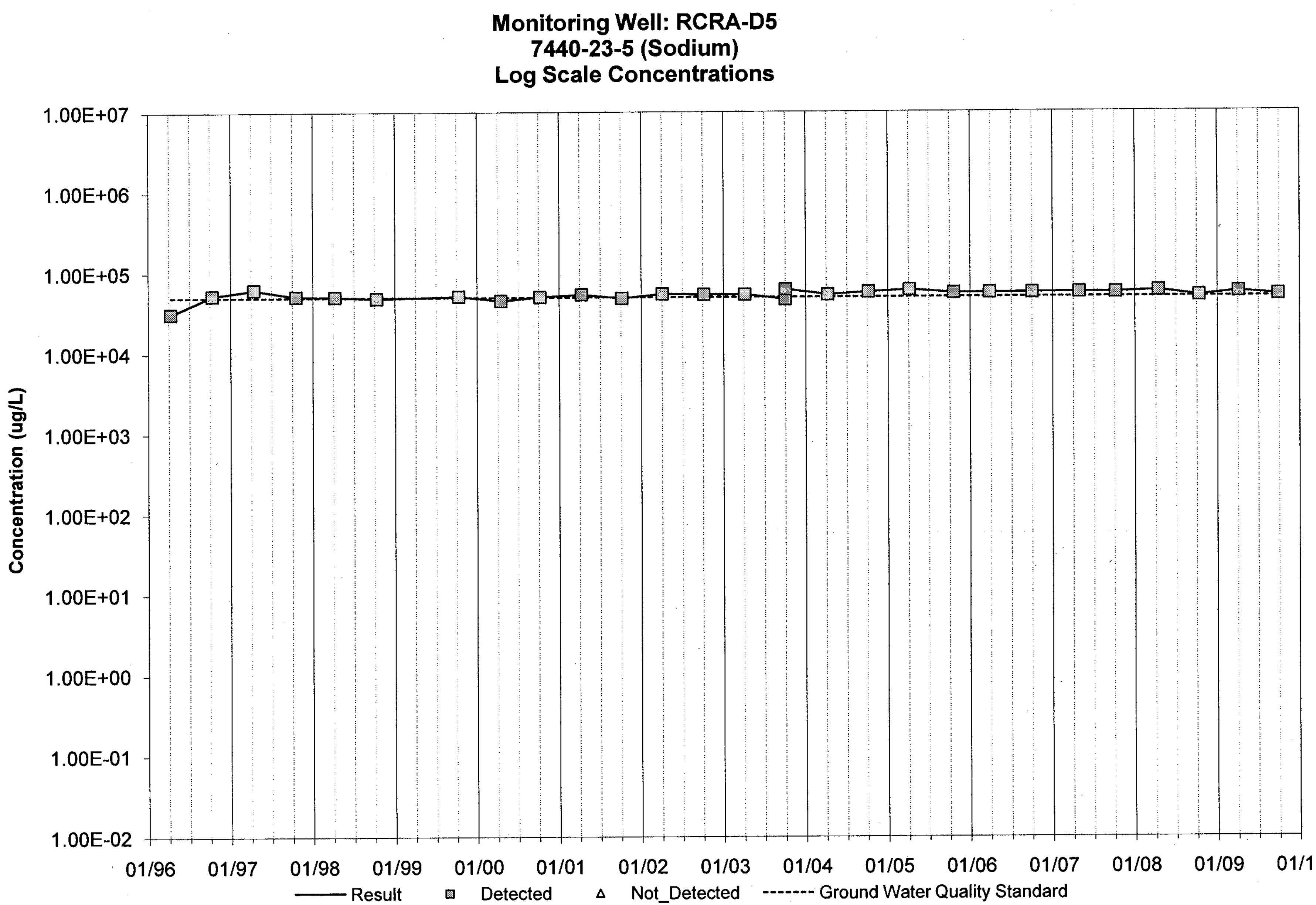


Monitoring Well: RCRA-D10
7440-23-5 (Sodium)
Log Scale Concentrations



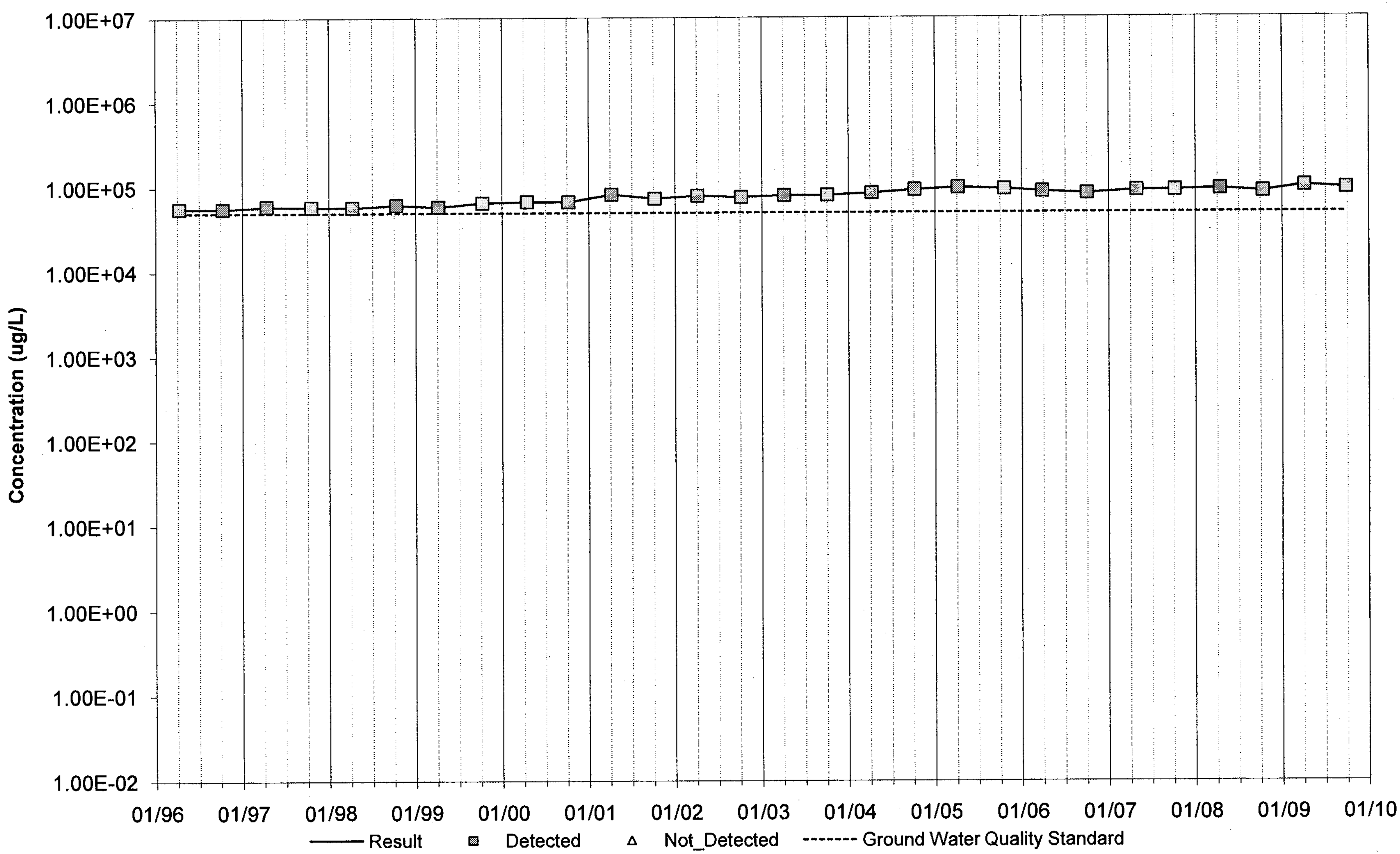


Monitoring Well: RCRA-D3
7440-23-5 (Sodium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

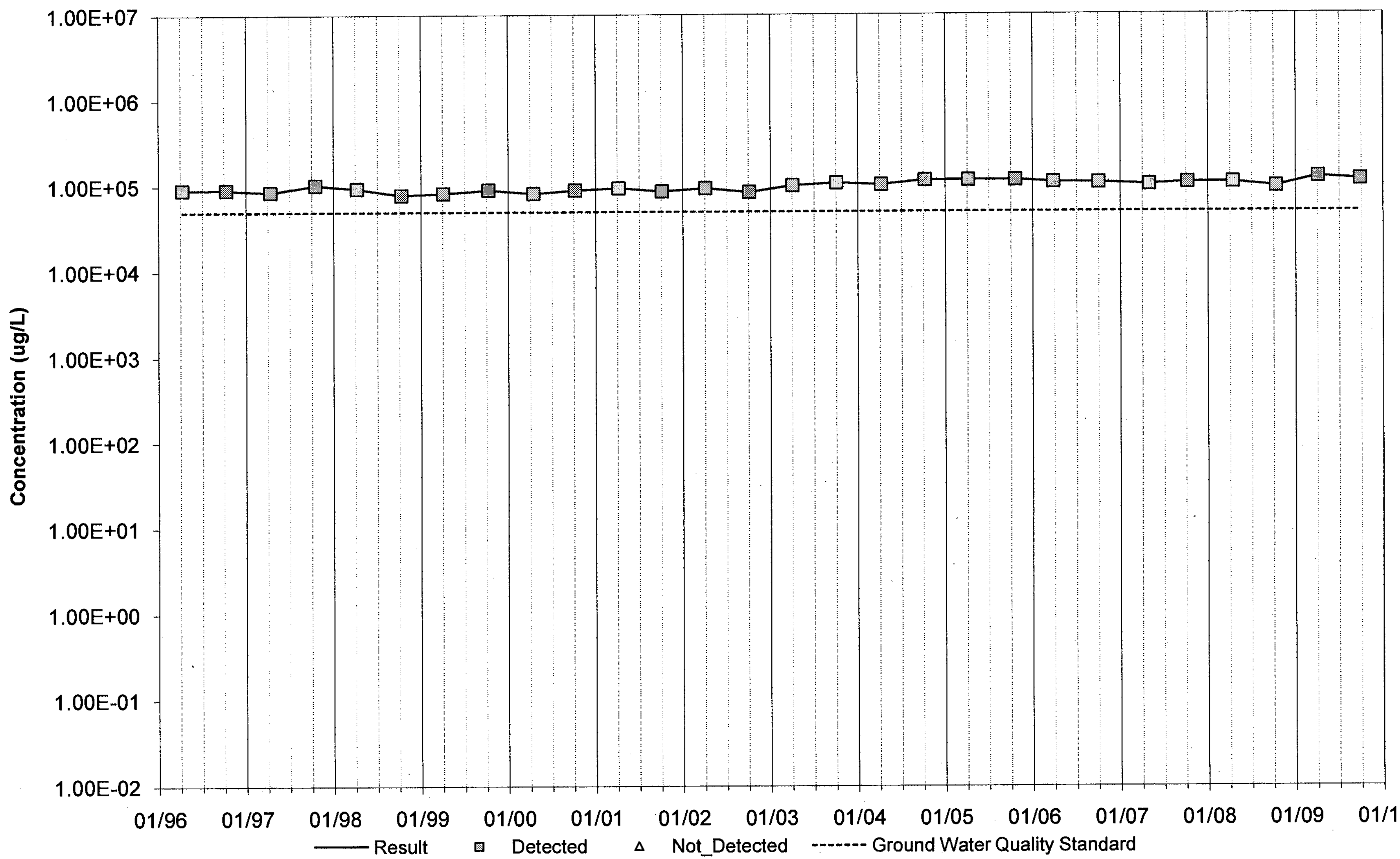


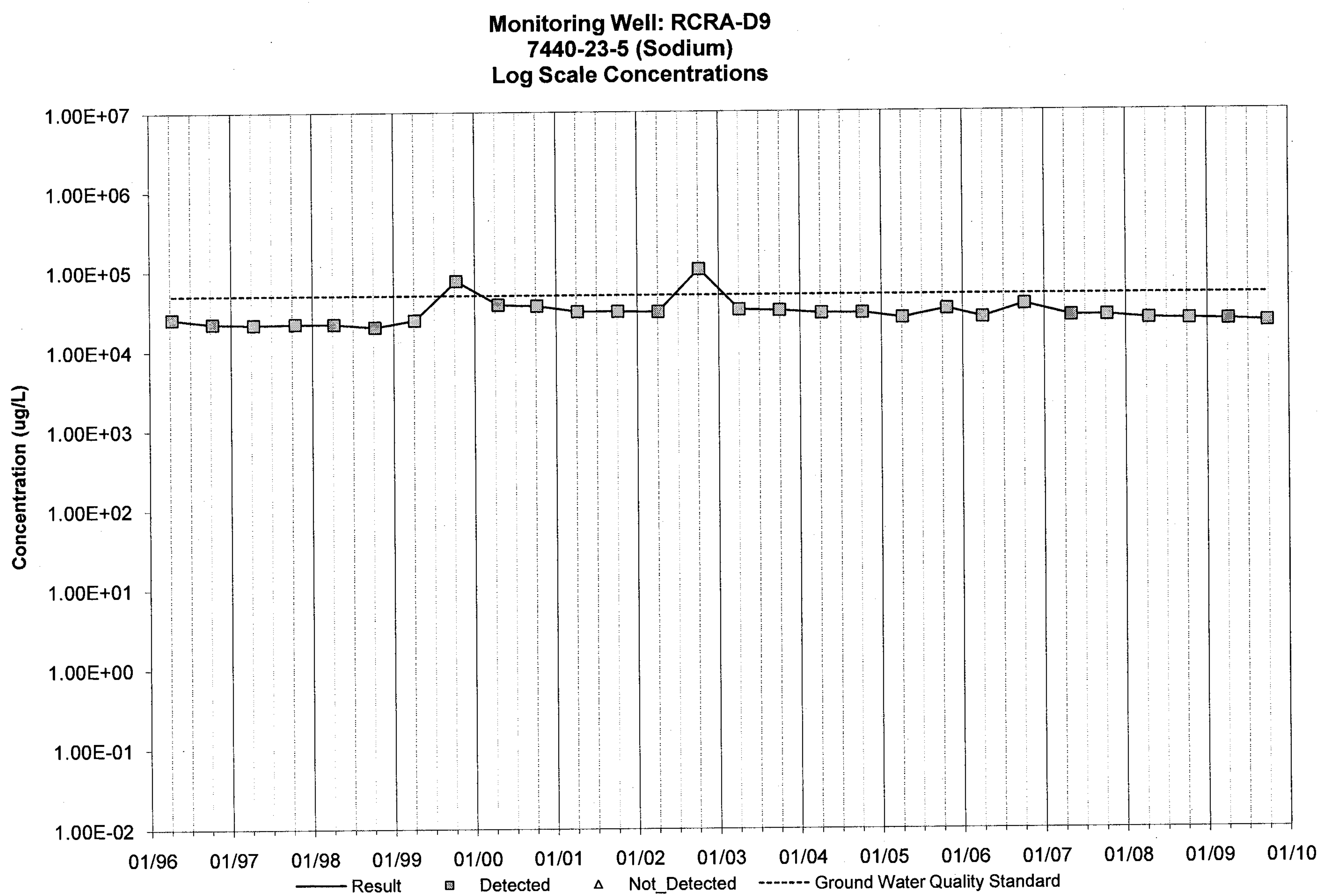
Monitoring Well: RCRA-D5
7440-23-5 (Sodium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

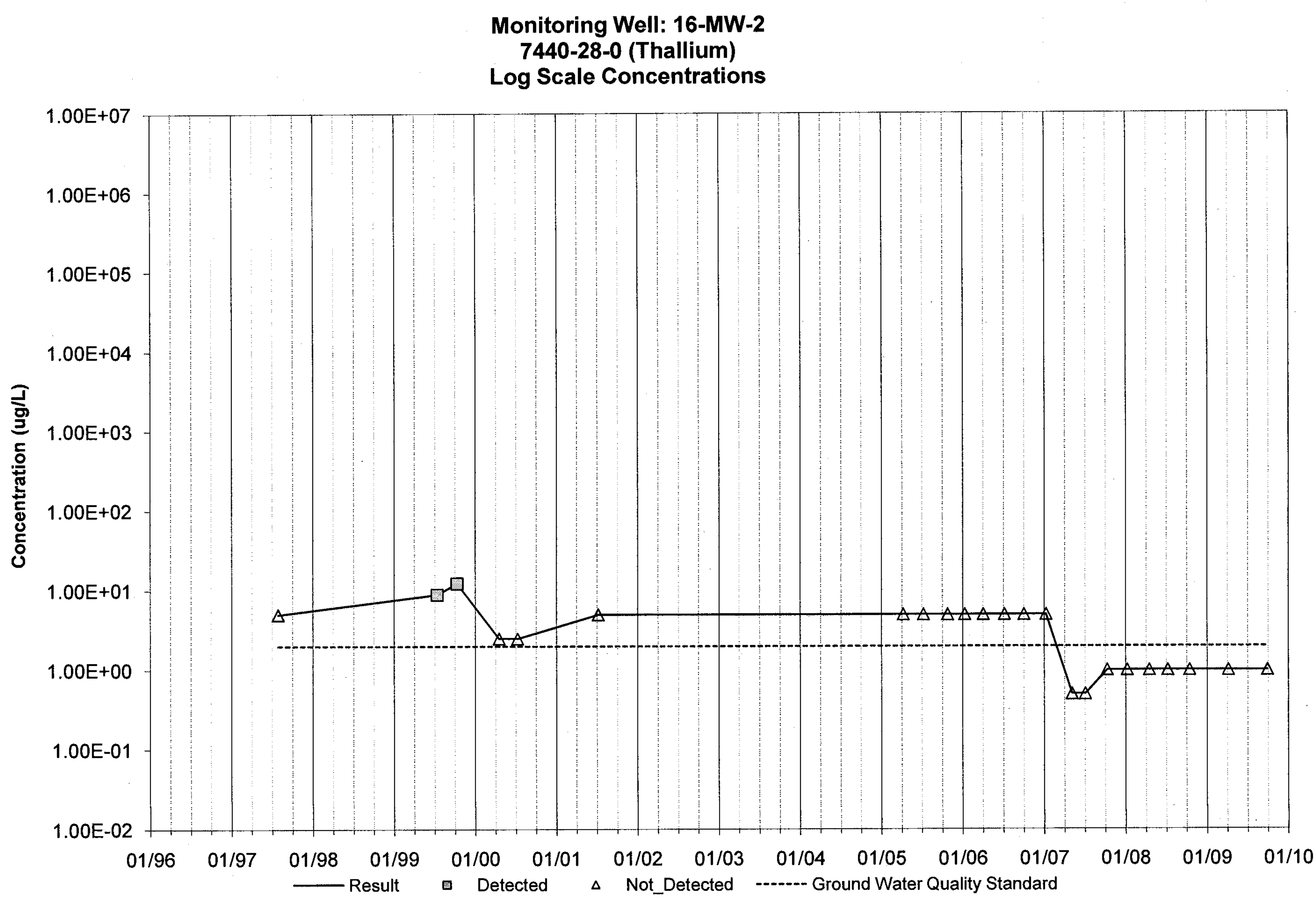
Monitoring Well: RCRA-D6
7440-23-5 (Sodium)
Log Scale Concentrations



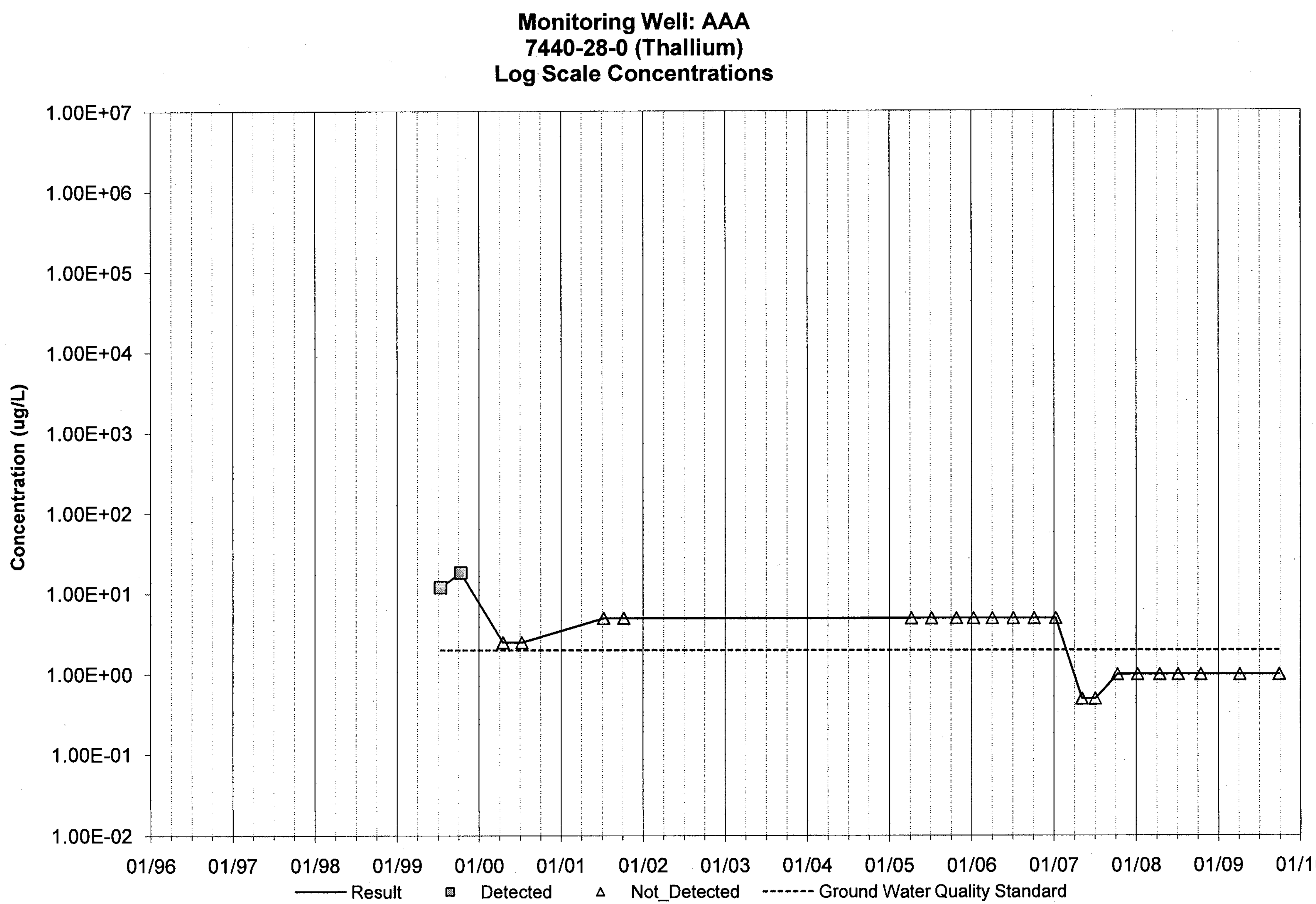
Monitoring Well: RCRA-D7
7440-23-5 (Sodium)
Log Scale Concentrations



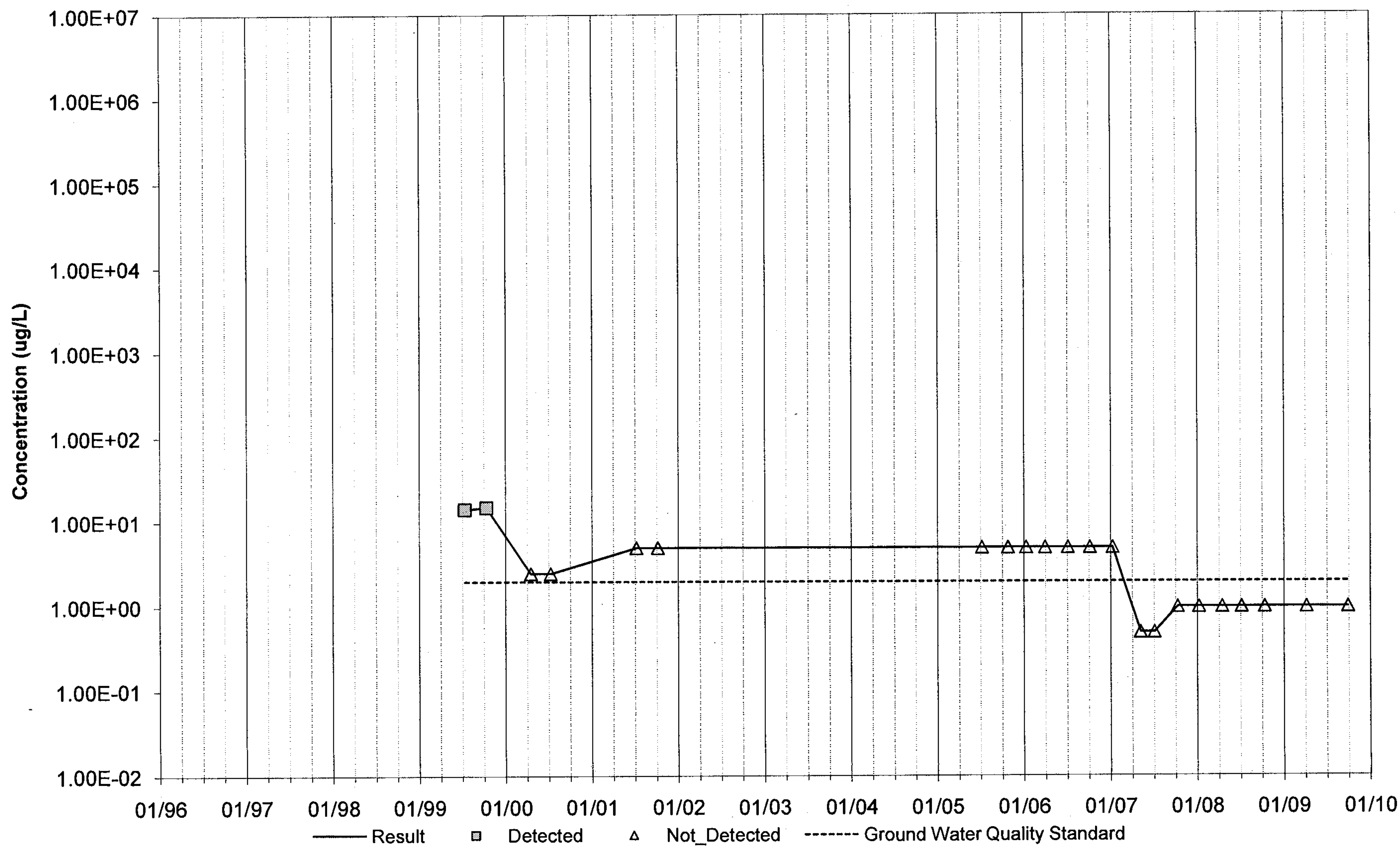

Monitoring Well: RCRA-D9
7440-23-5 (Sodium)
Log Scale Concentrations
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
Concentration (ug/L)
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



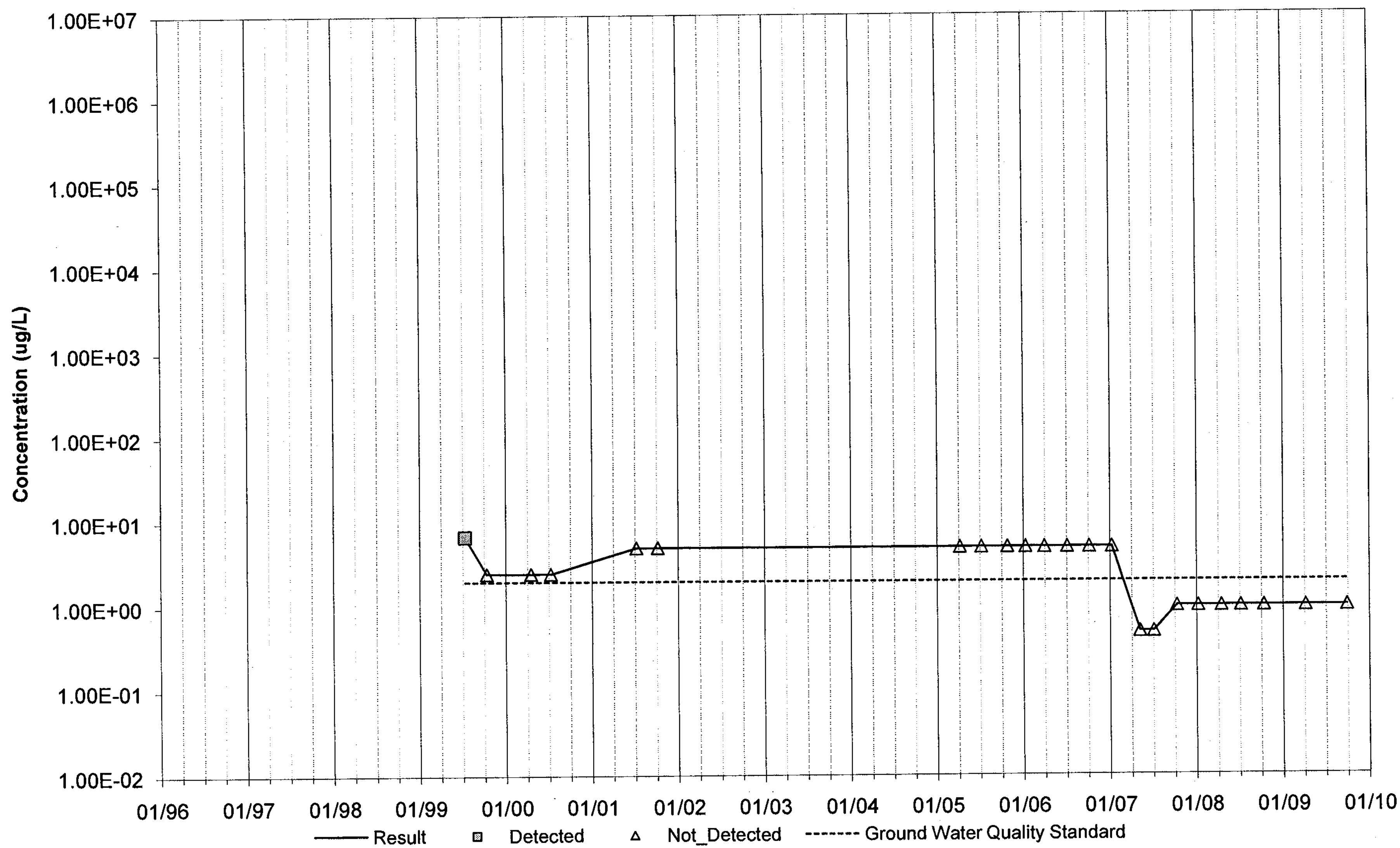
Monitoring Well: 16-MW-2
7440-28-0 (Thallium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: AAA
7440-28-0 (Thallium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

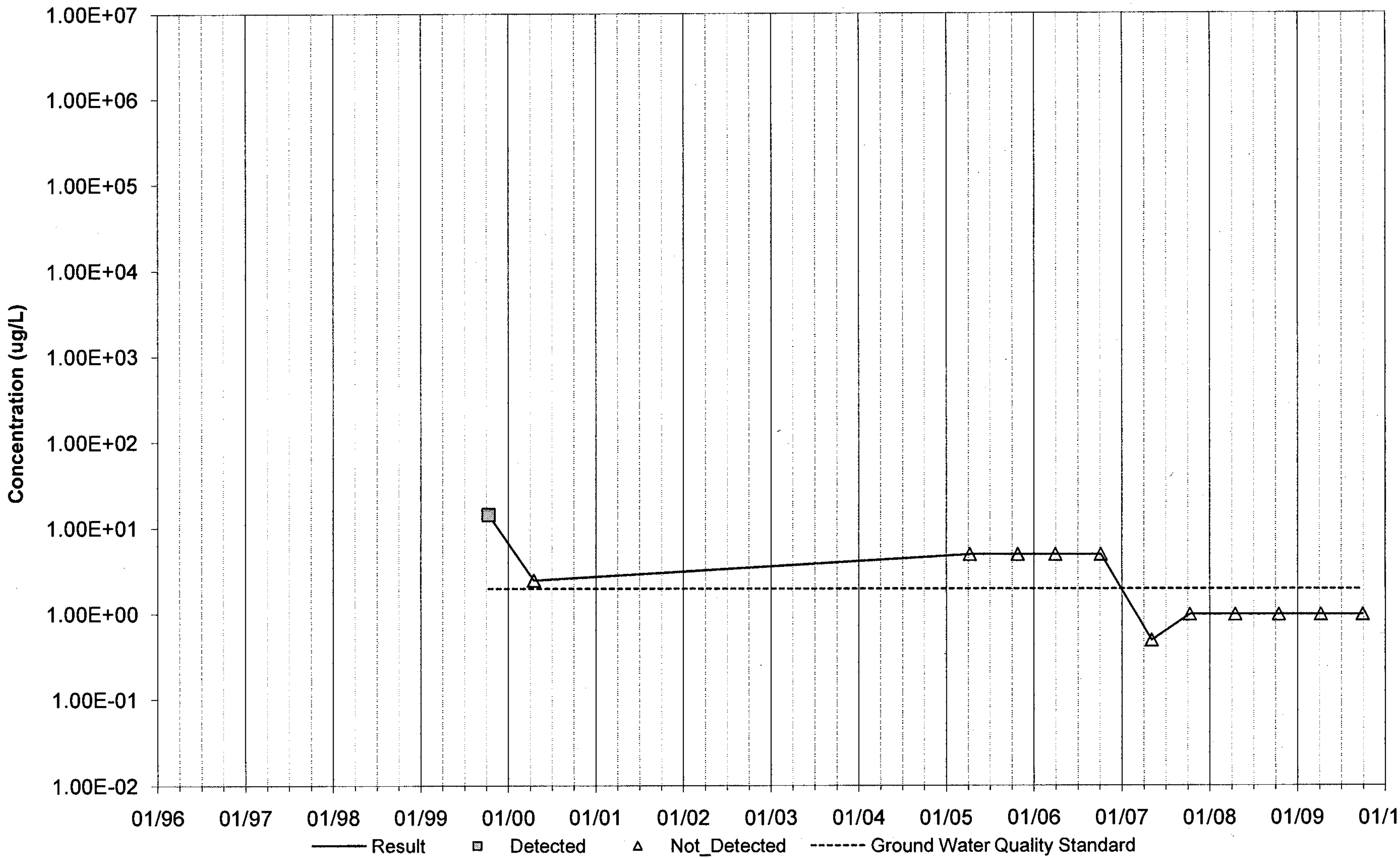
Monitoring Well: CCC-R
7440-28-0 (Thallium)
Log Scale Concentrations



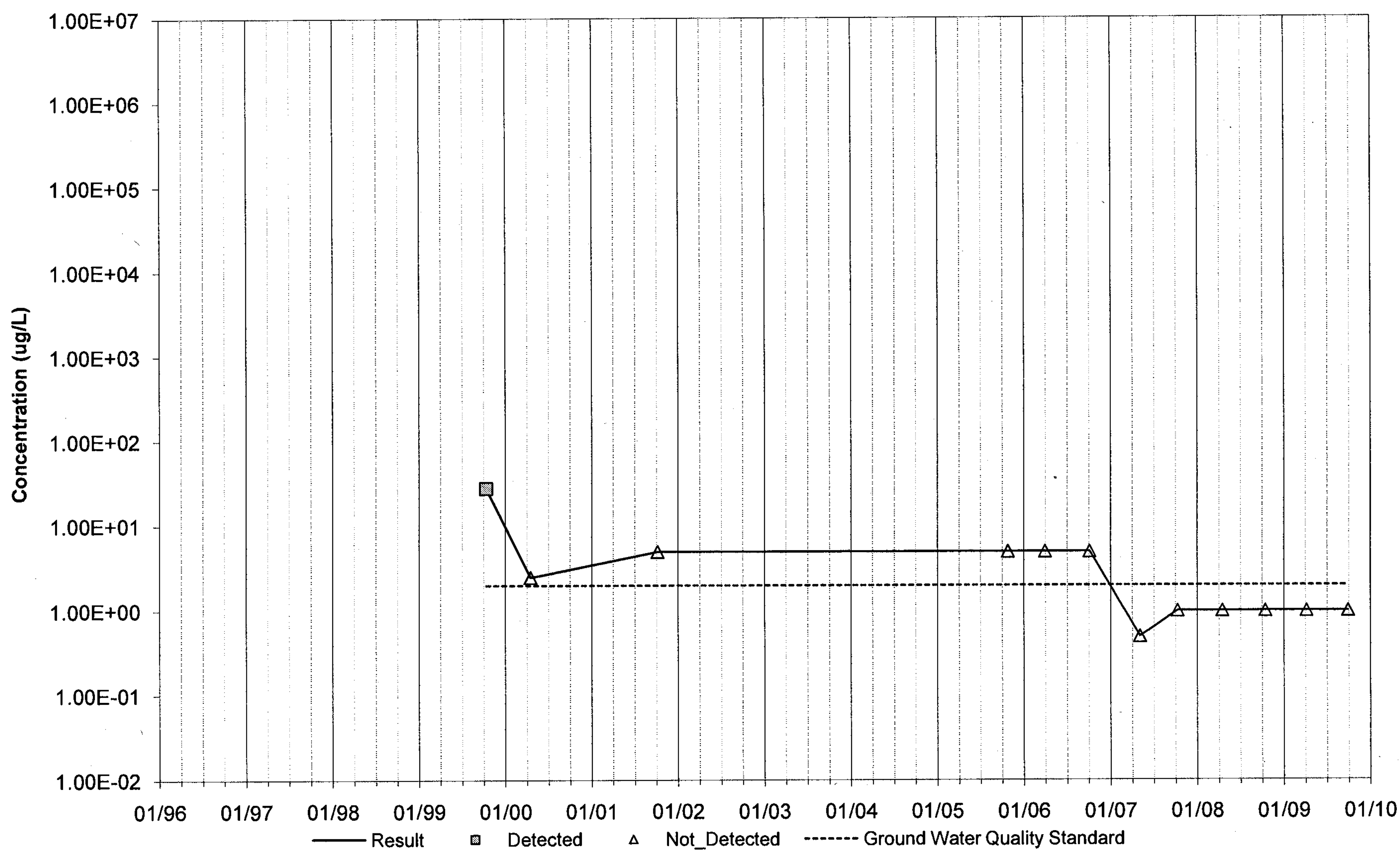
Monitoring Well: EEE-R
7440-28-0 (Thallium)
Log Scale Concentrations



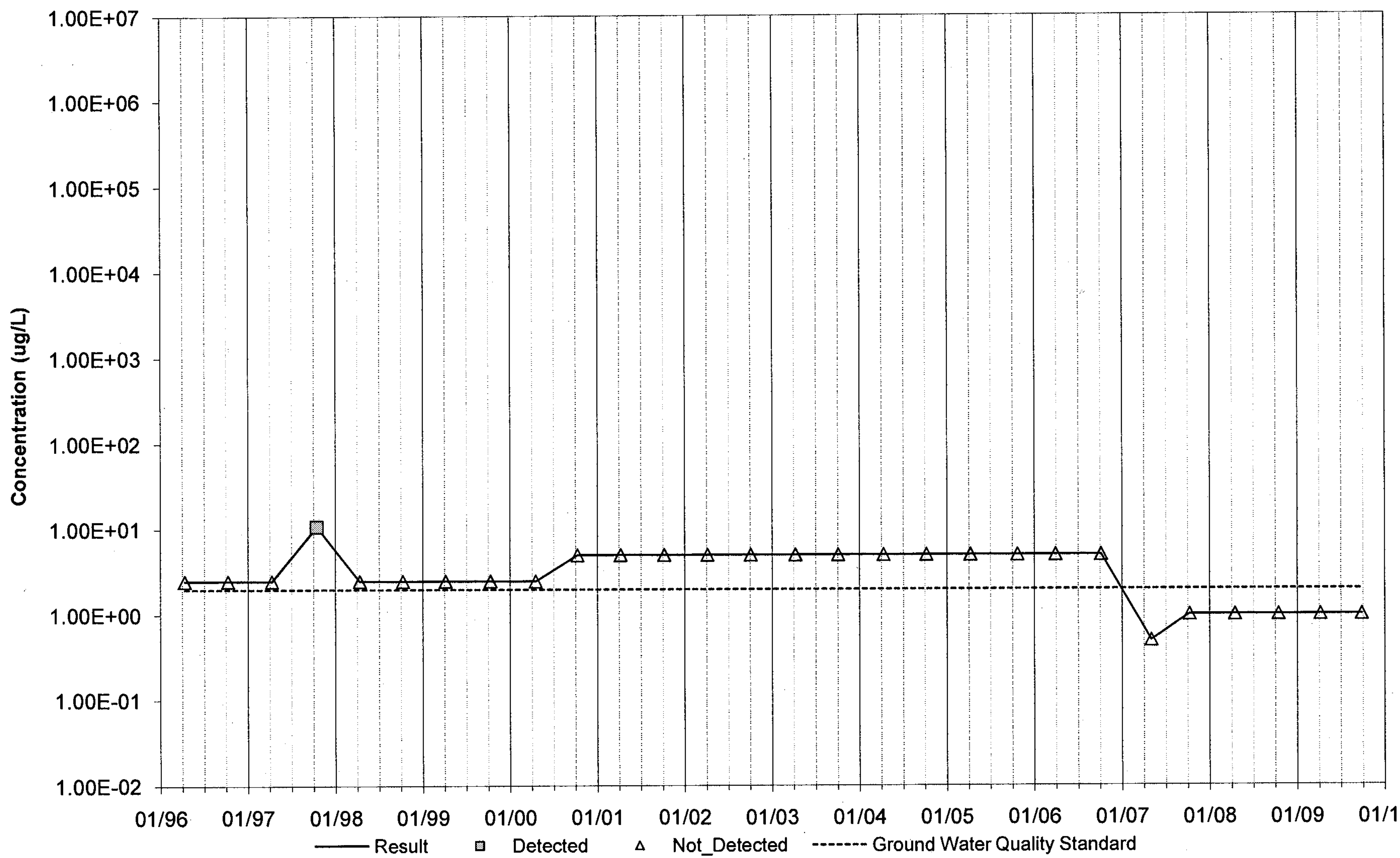
Monitoring Well: III
7440-28-0 (Thallium)
Log Scale Concentrations



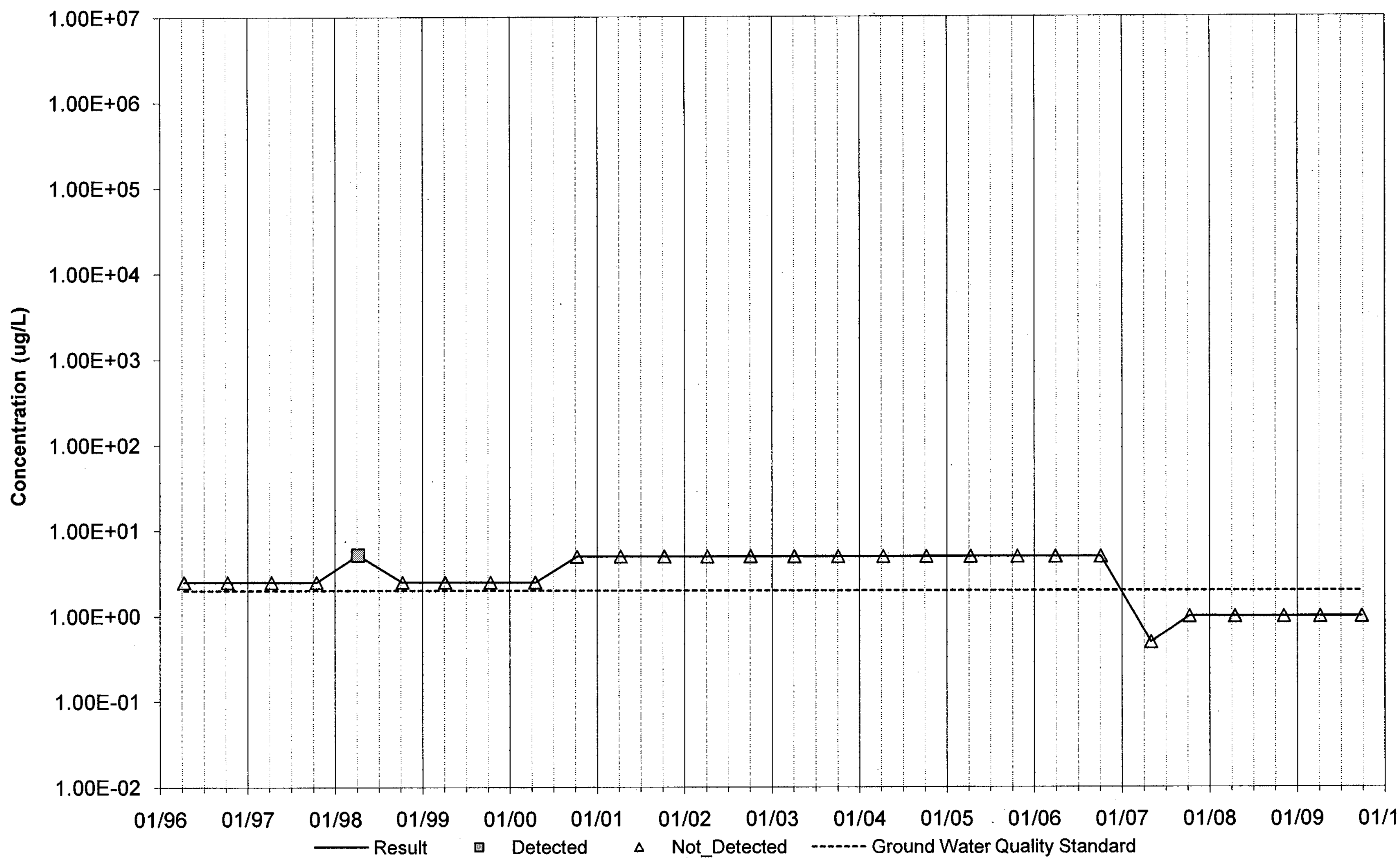
Monitoring Well: KKK
7440-28-0 (Thallium)
Log Scale Concentrations



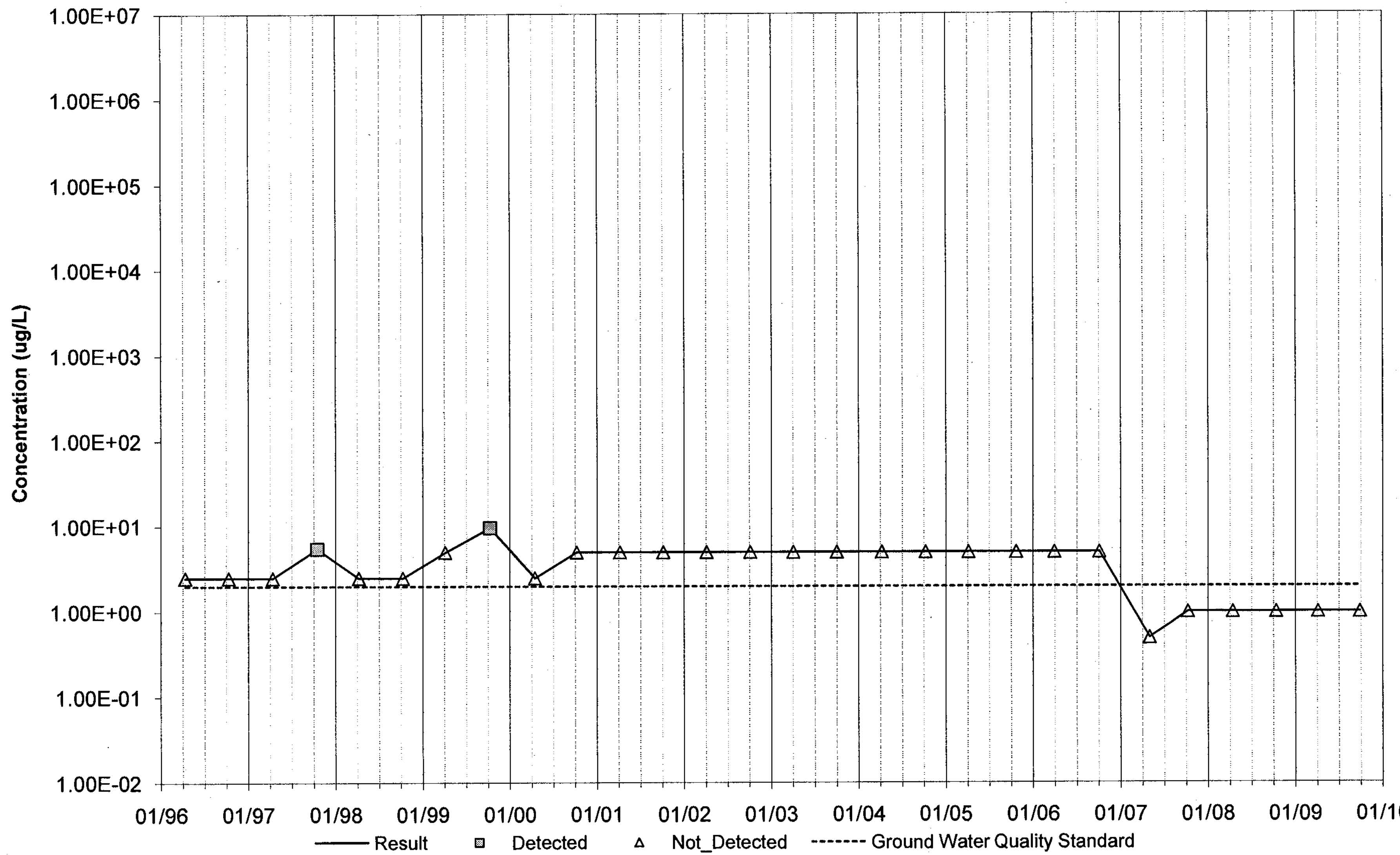
Monitoring Well: RCRA-D12
7440-28-0 (Thallium)
Log Scale Concentrations

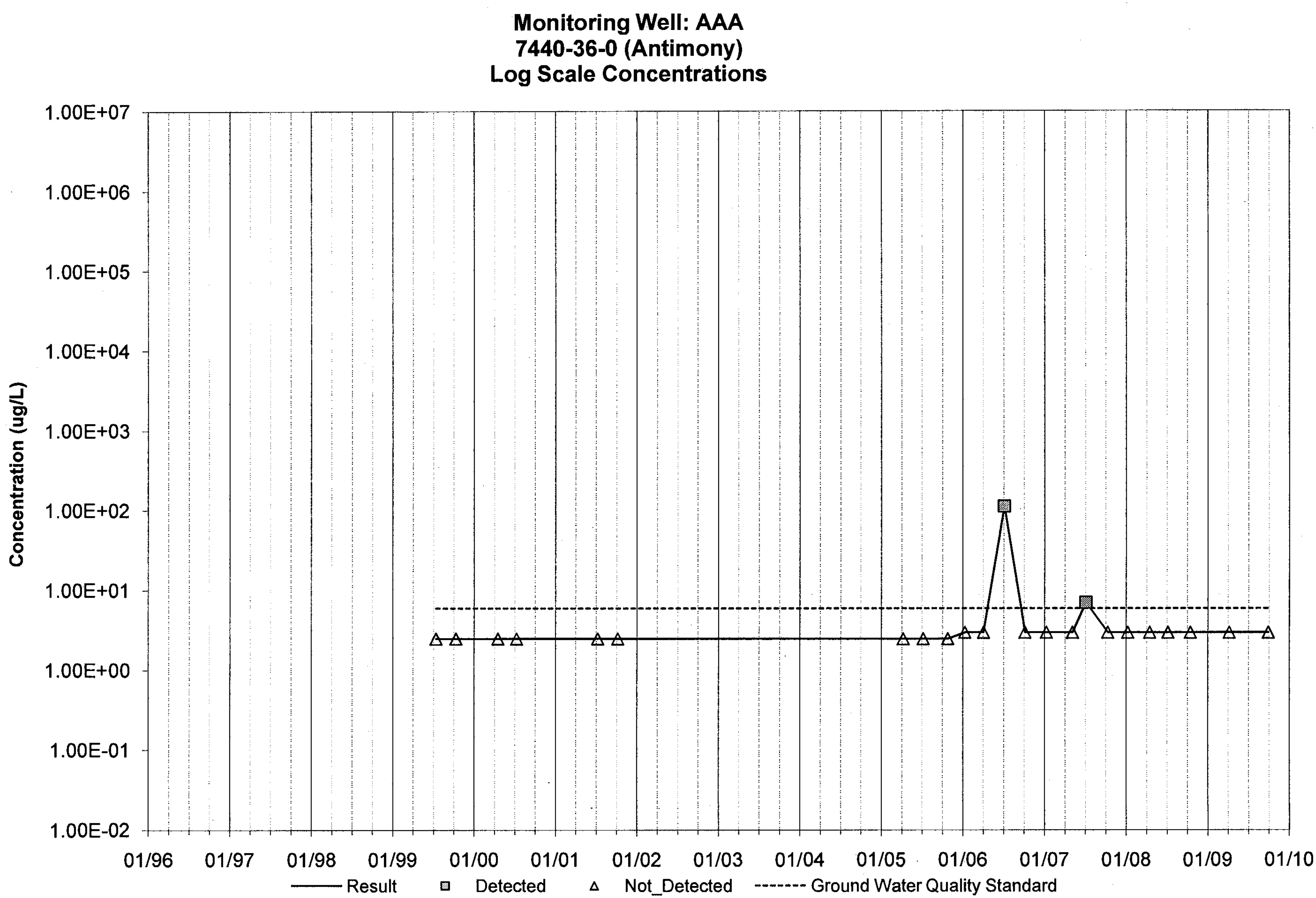


Monitoring Well: RCRA-D15
7440-28-0 (Thallium)
Log Scale Concentrations



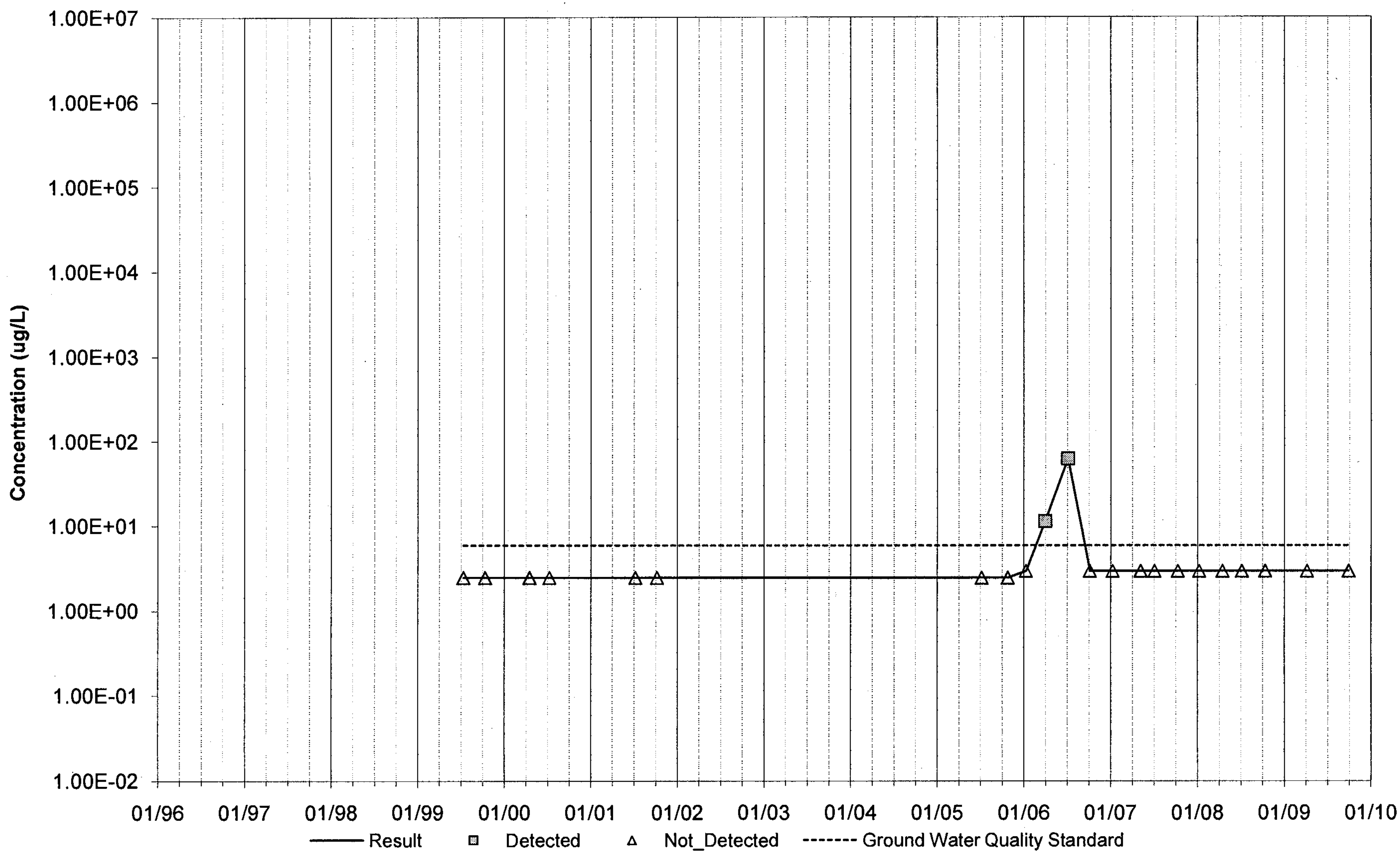
Monitoring Well: RCRA-D9
7440-28-0 (Thallium)
Log Scale Concentrations



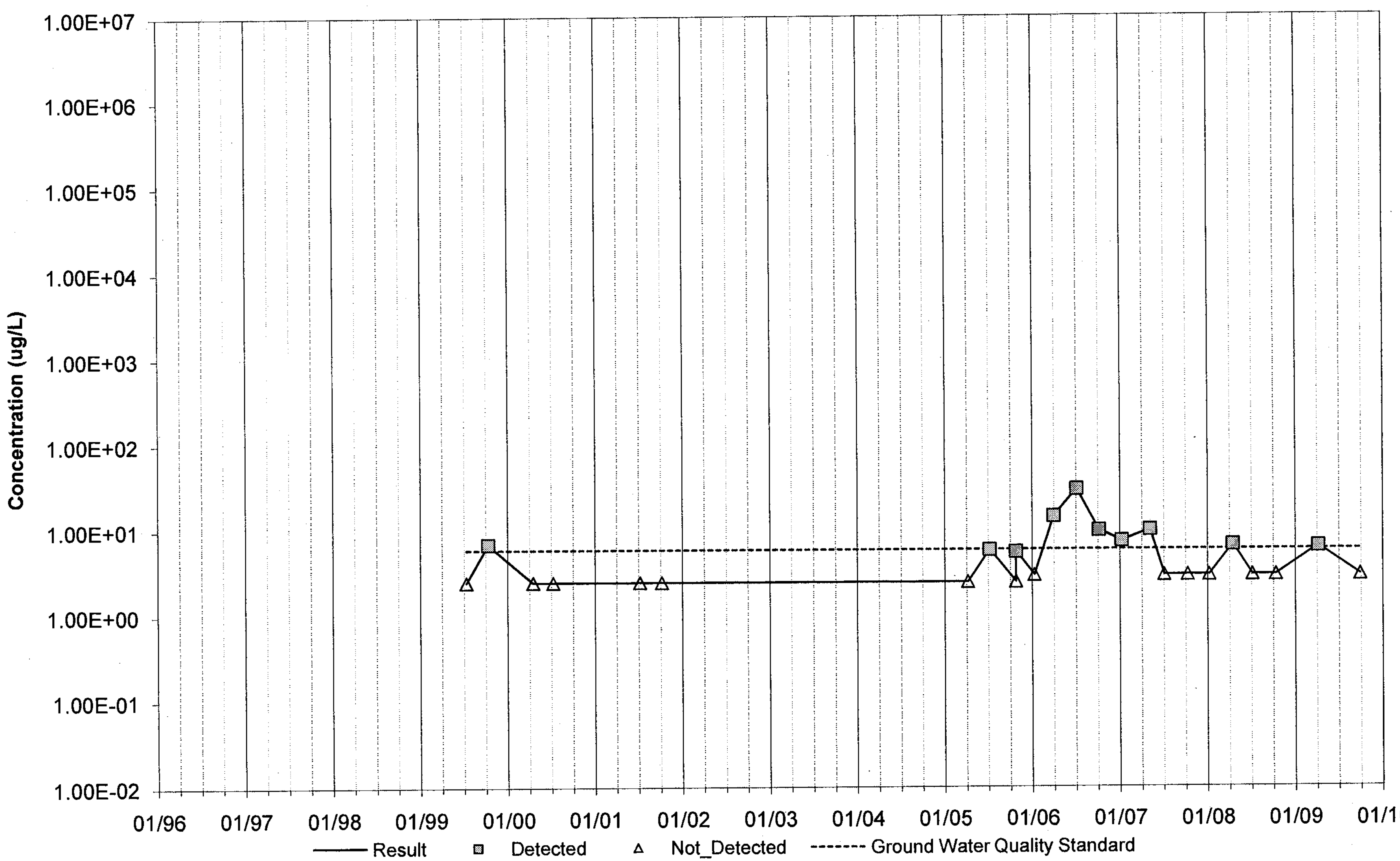


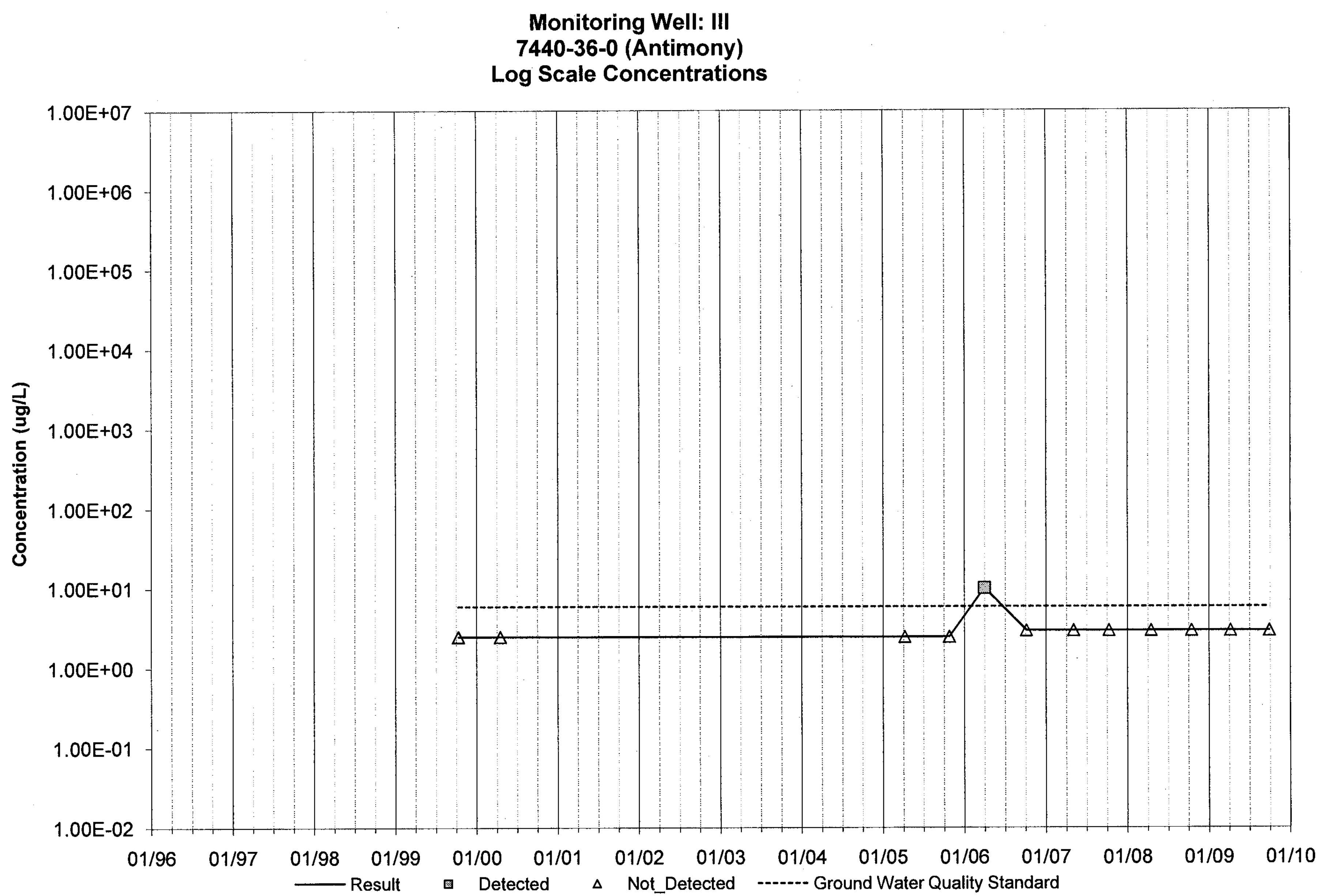
Monitoring Well: AAA
7440-36-0 (Antimony)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: CCC-R
7440-36-0 (Antimony)
Log Scale Concentrations



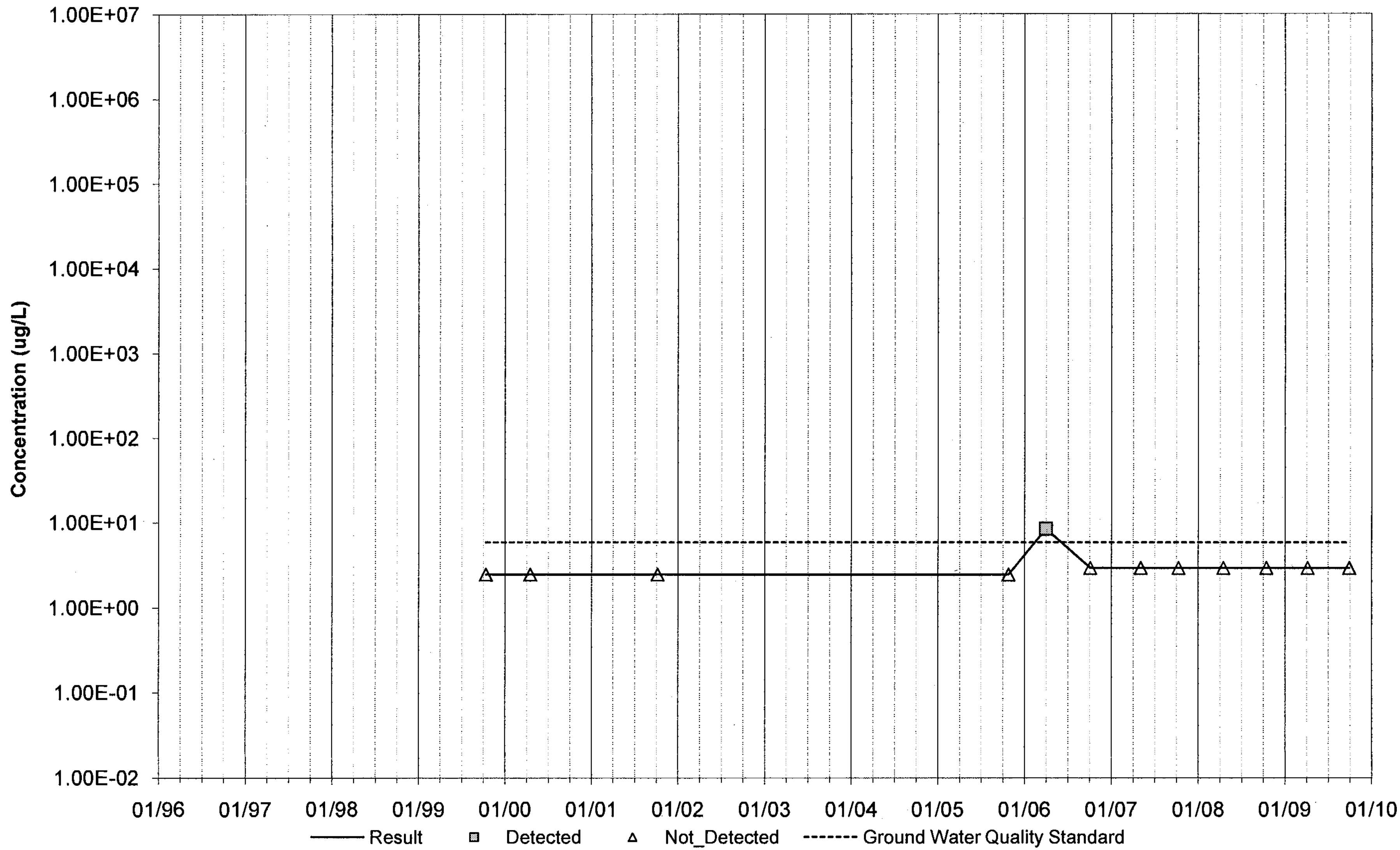
Monitoring Well: EEE-R
7440-36-0 (Antimony)
Log Scale Concentrations



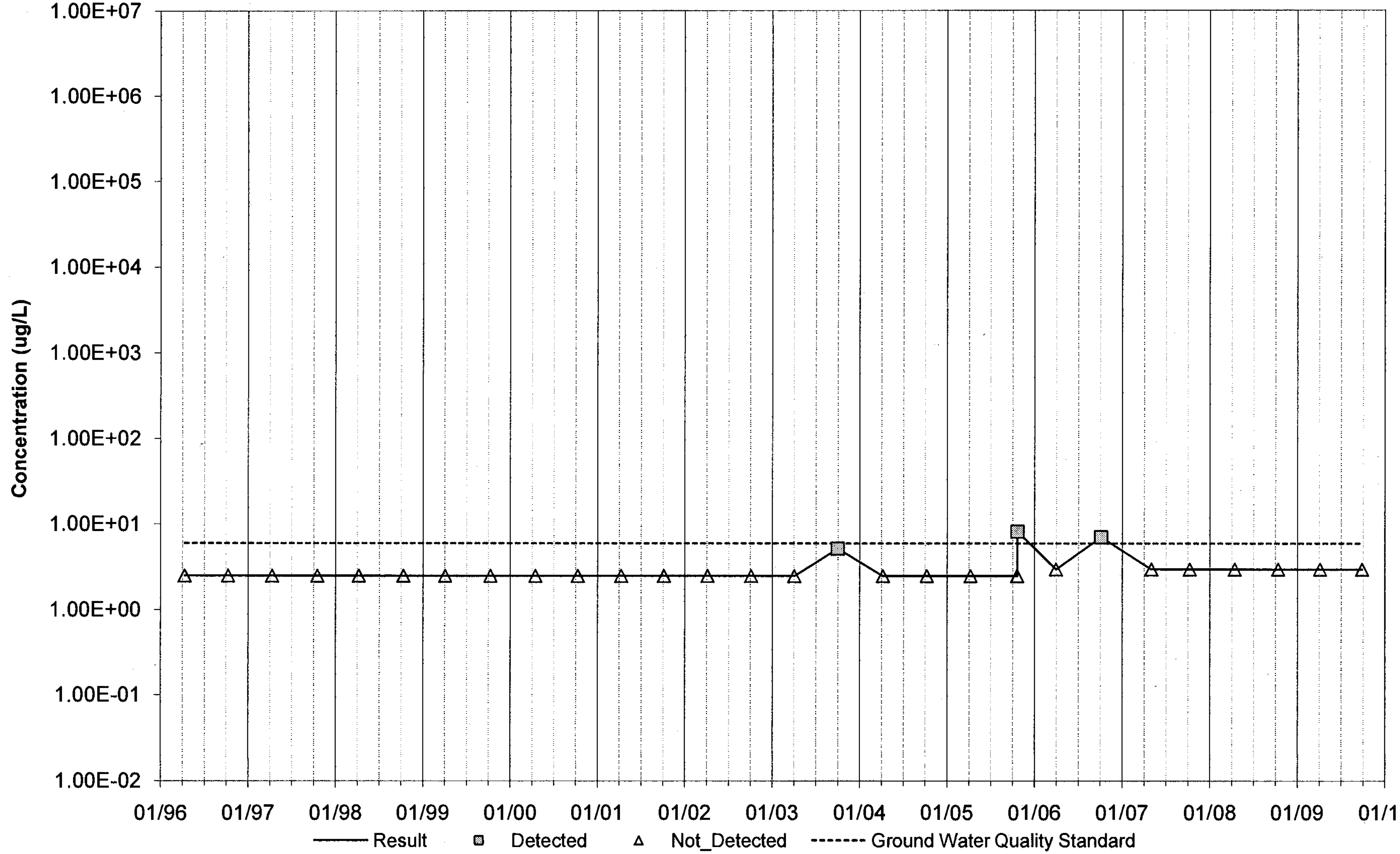


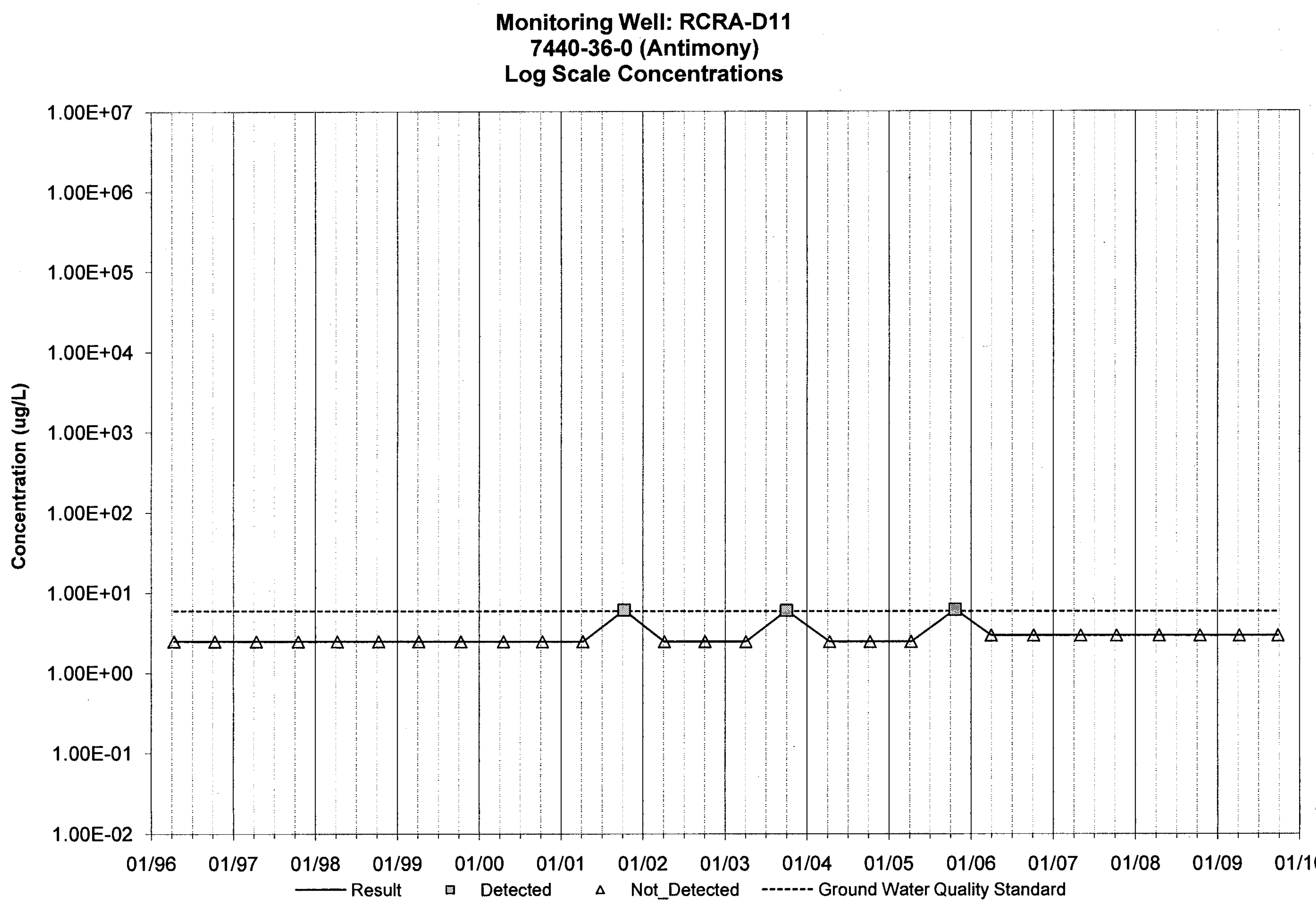
Monitoring Well: III
7440-36-0 (Antimony)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: KKK
7440-36-0 (Antimony)
Log Scale Concentrations

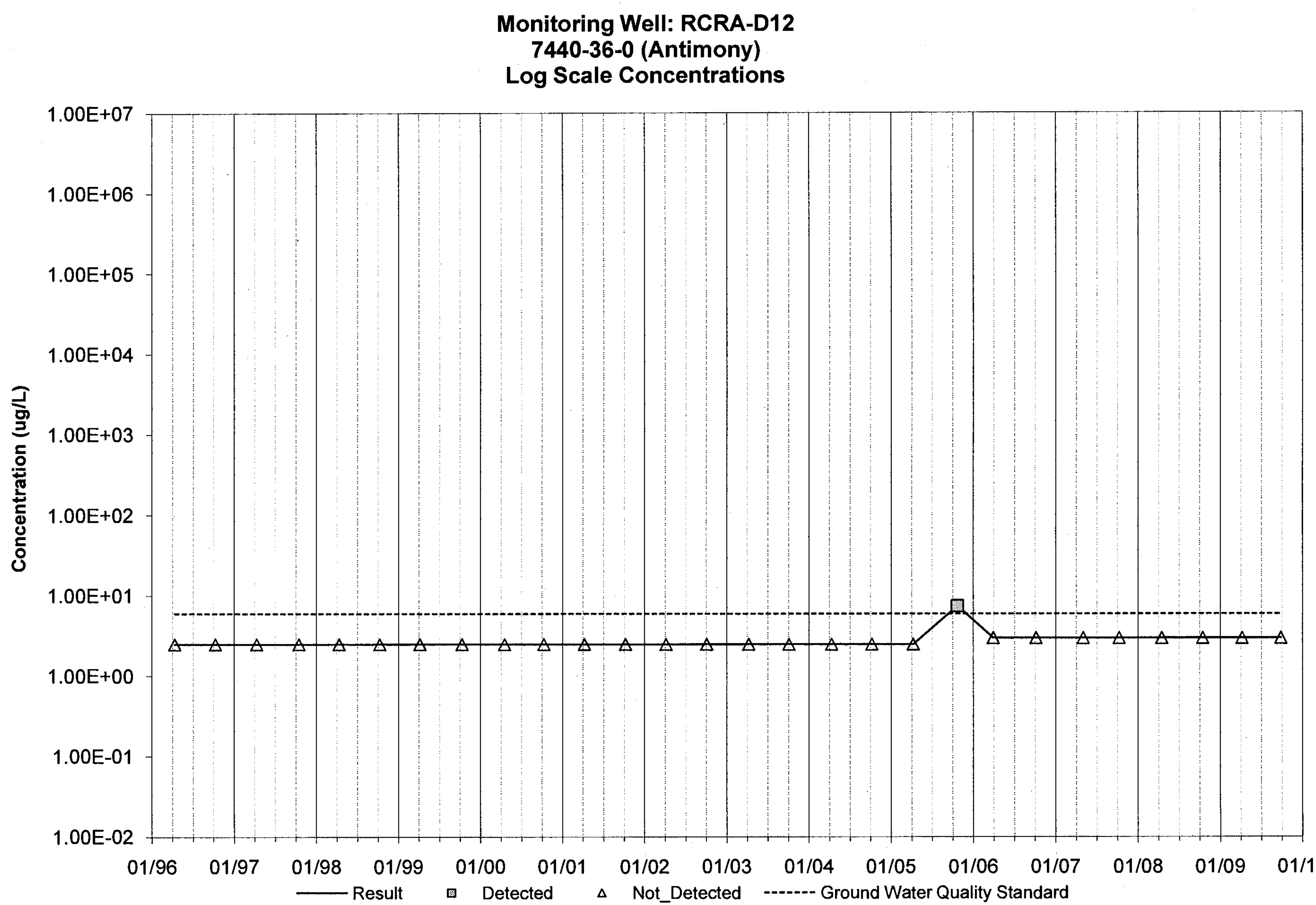


Monitoring Well: RCRA-D10
7440-36-0 (Antimony)
Log Scale Concentrations

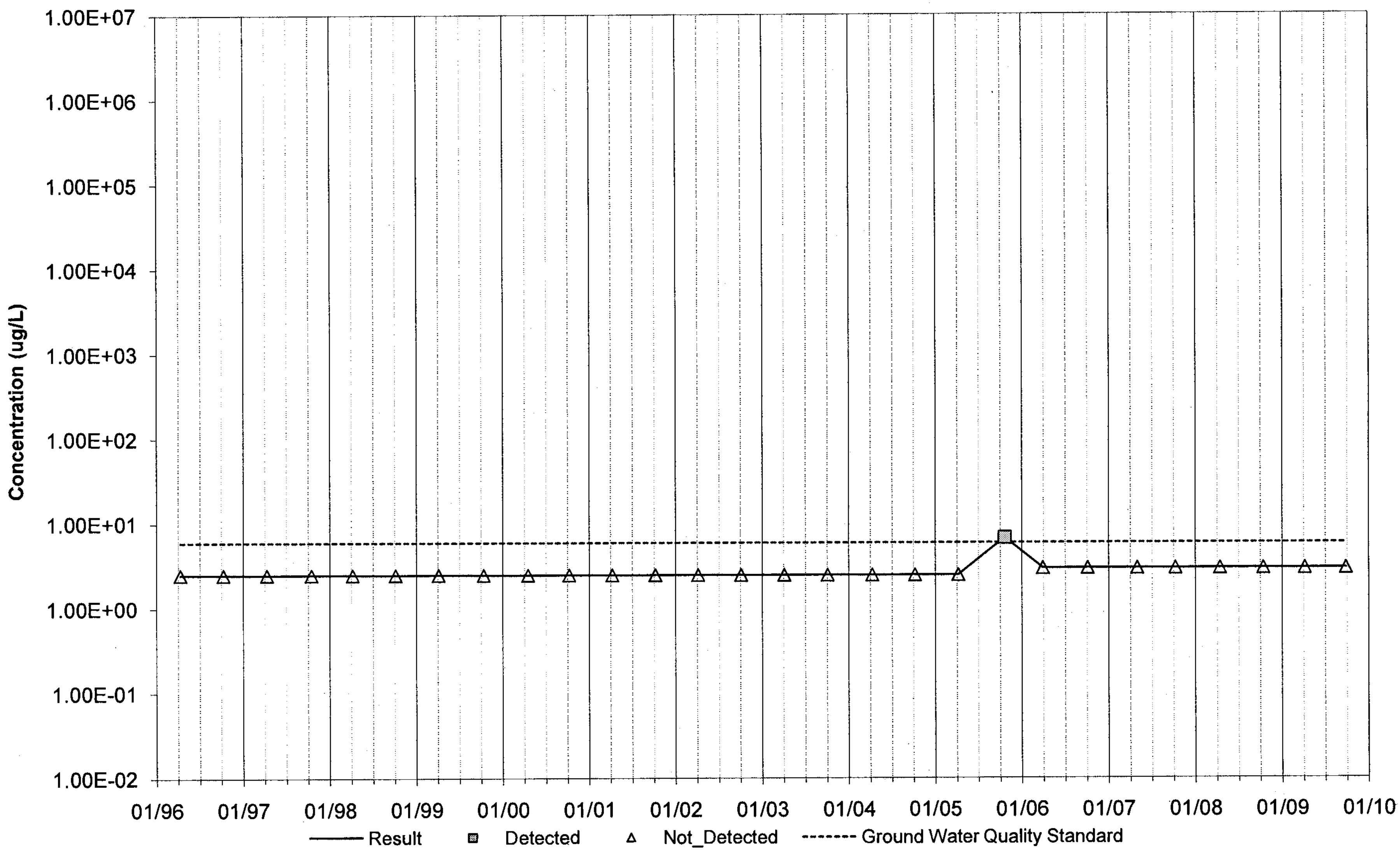




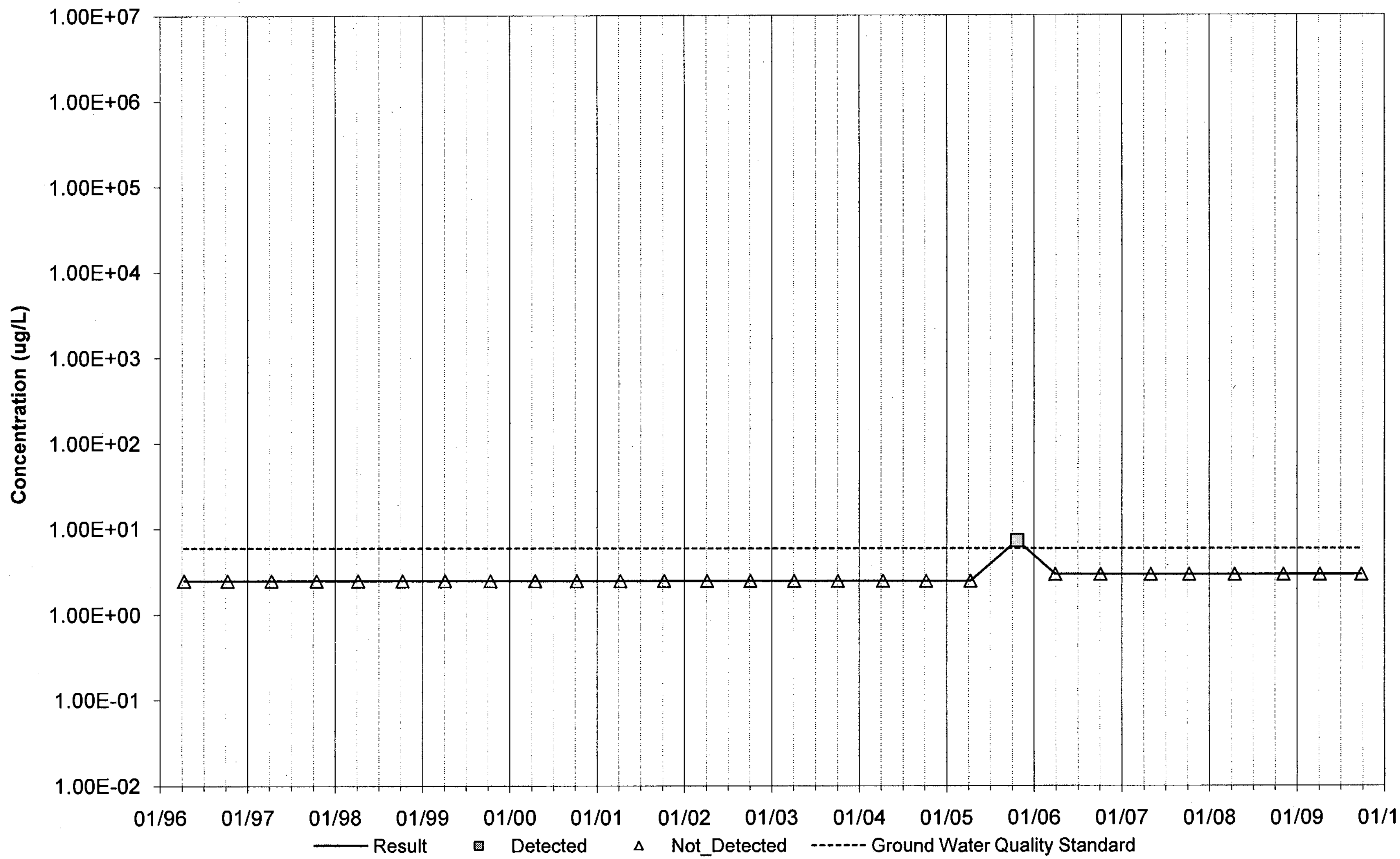
Monitoring Well: RCRA-D11
7440-36-0 (Antimony)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

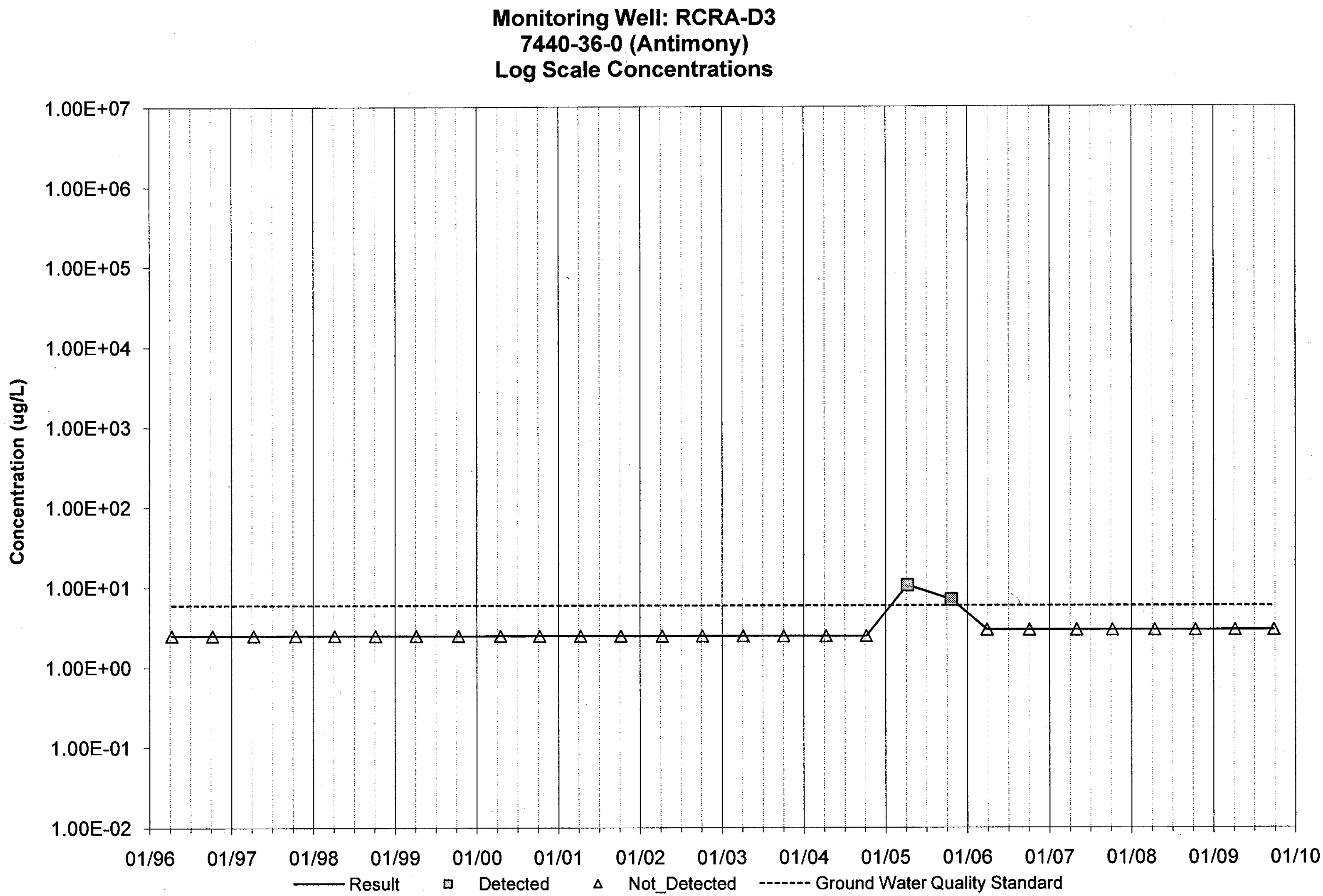

Monitoring Well: RCRA-D12
7440-36-0 (Antimony)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D14
7440-36-0 (Antimony)
Log Scale Concentrations

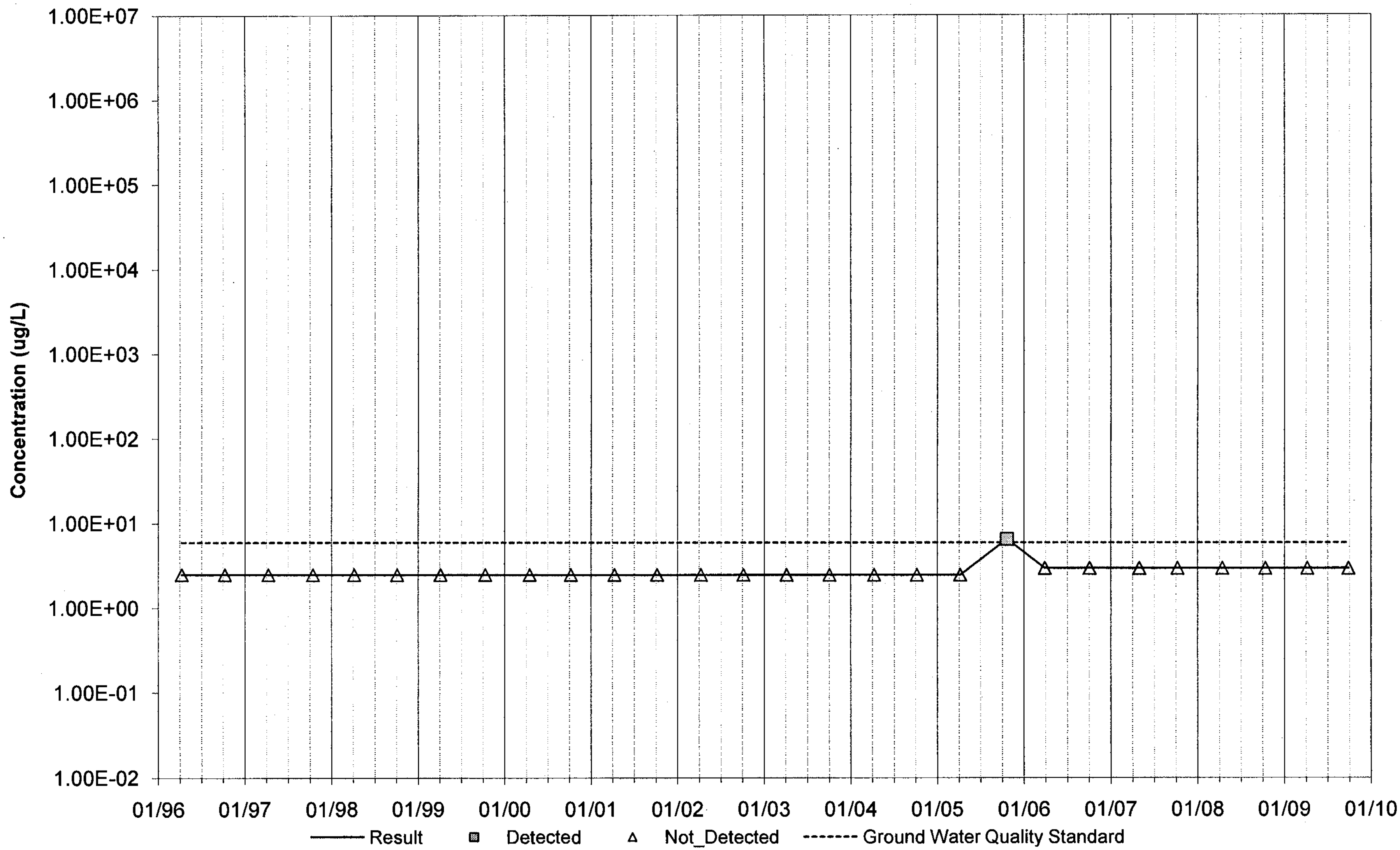


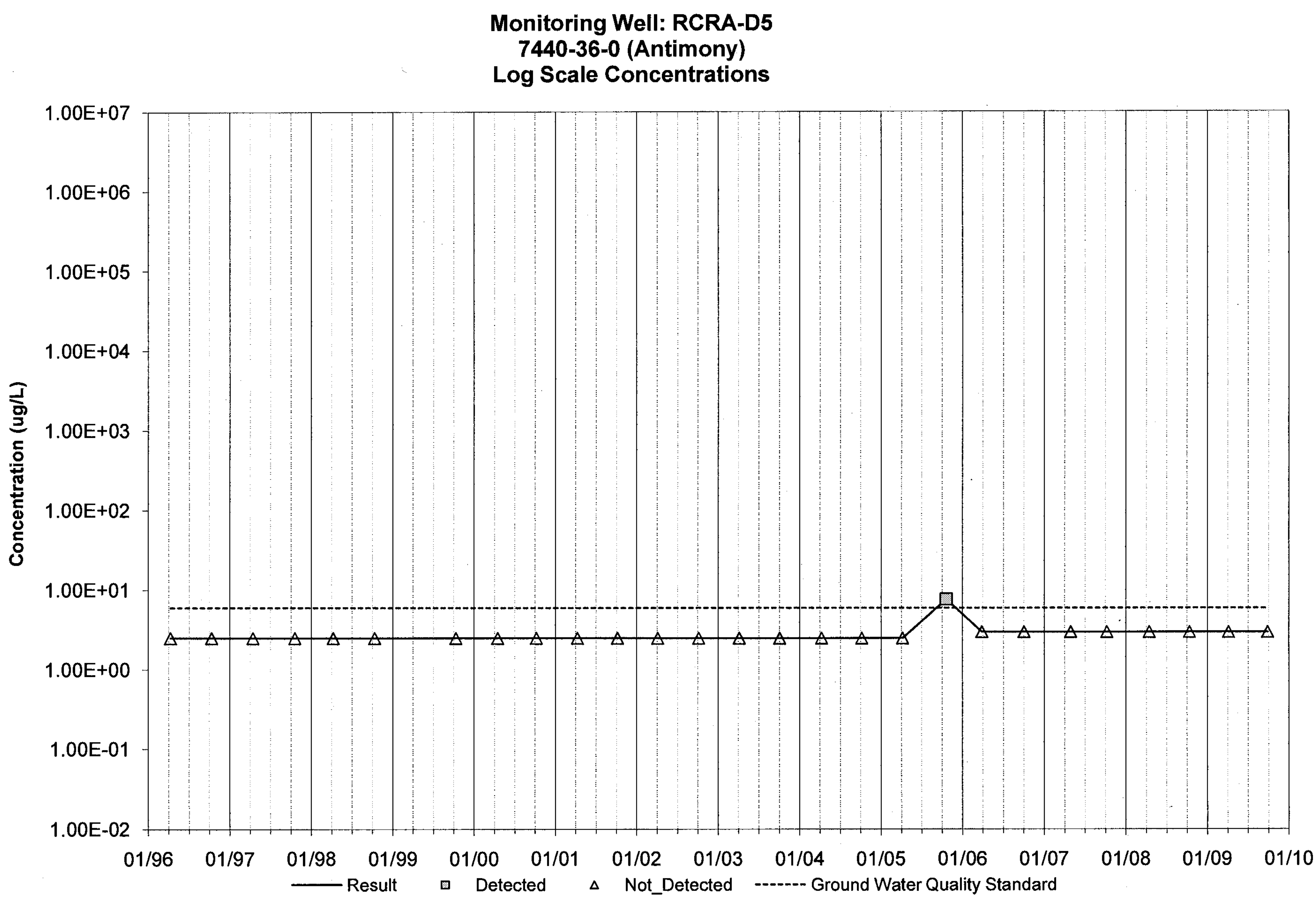
Monitoring Well: RCRA-D15
7440-36-0 (Antimony)
Log Scale Concentrations




Monitoring Well: RCRA-D3
7440-36-0 (Antimony)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

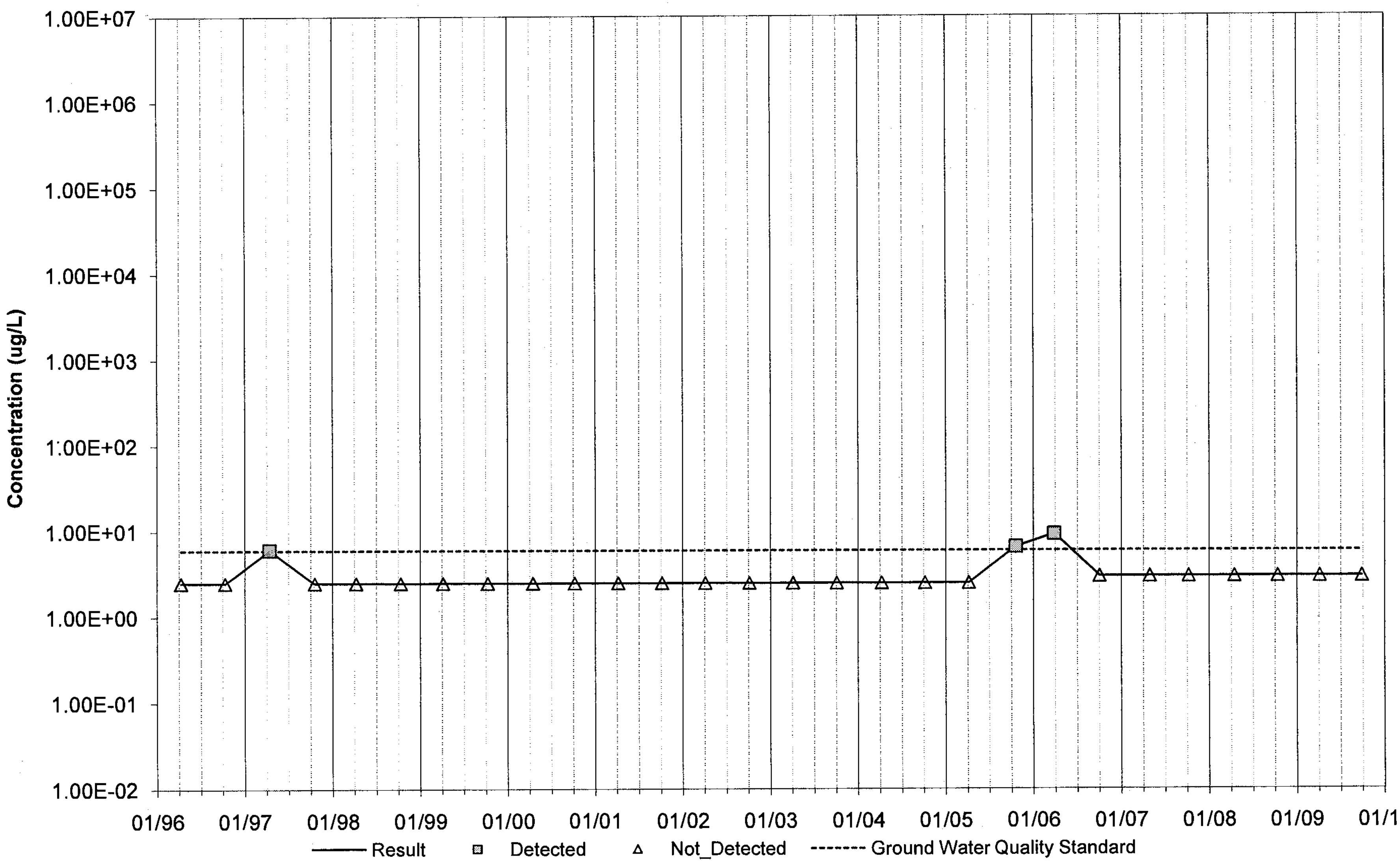
Monitoring Well: RCRA-D4
7440-36-0 (Antimony)
Log Scale Concentrations



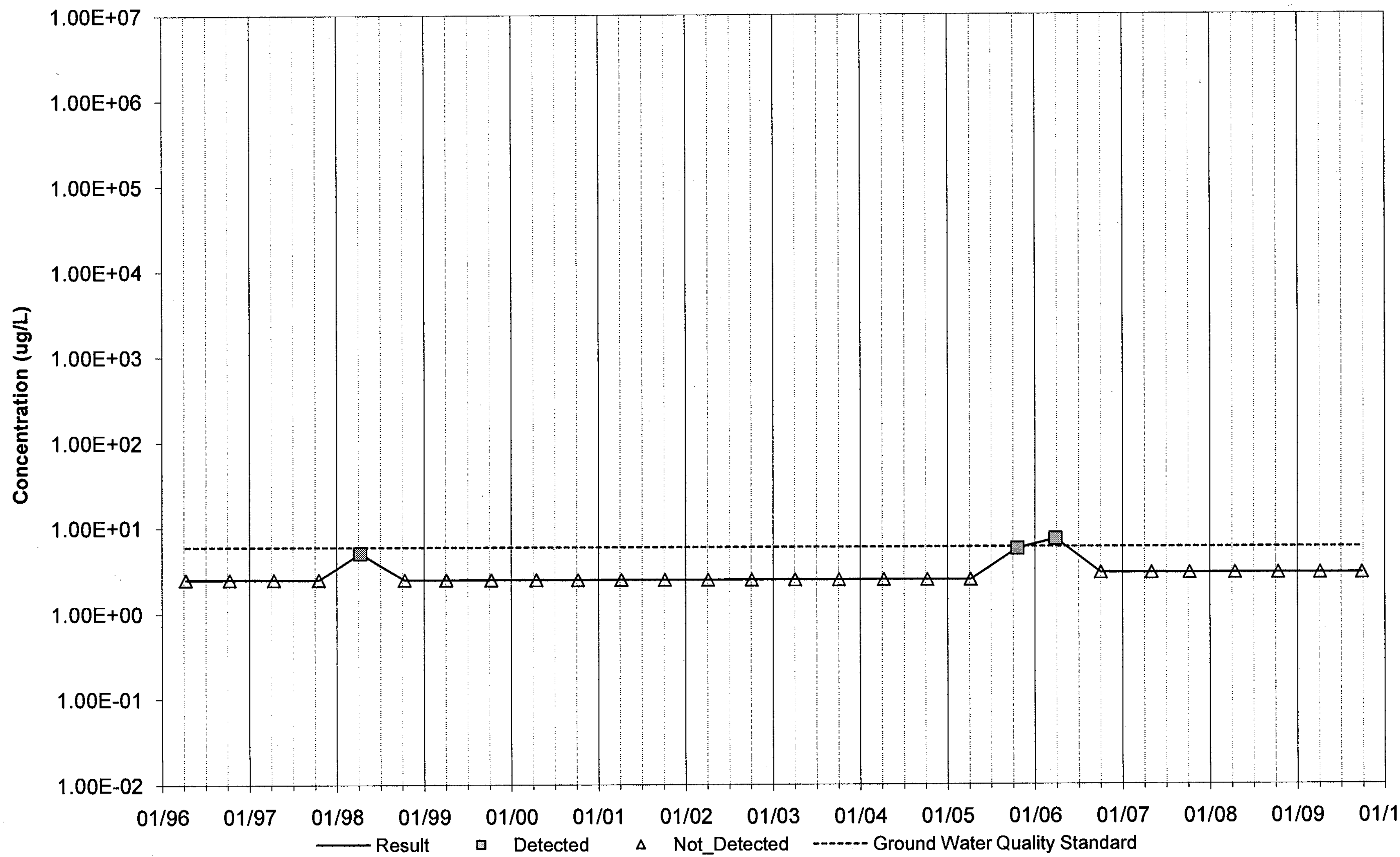


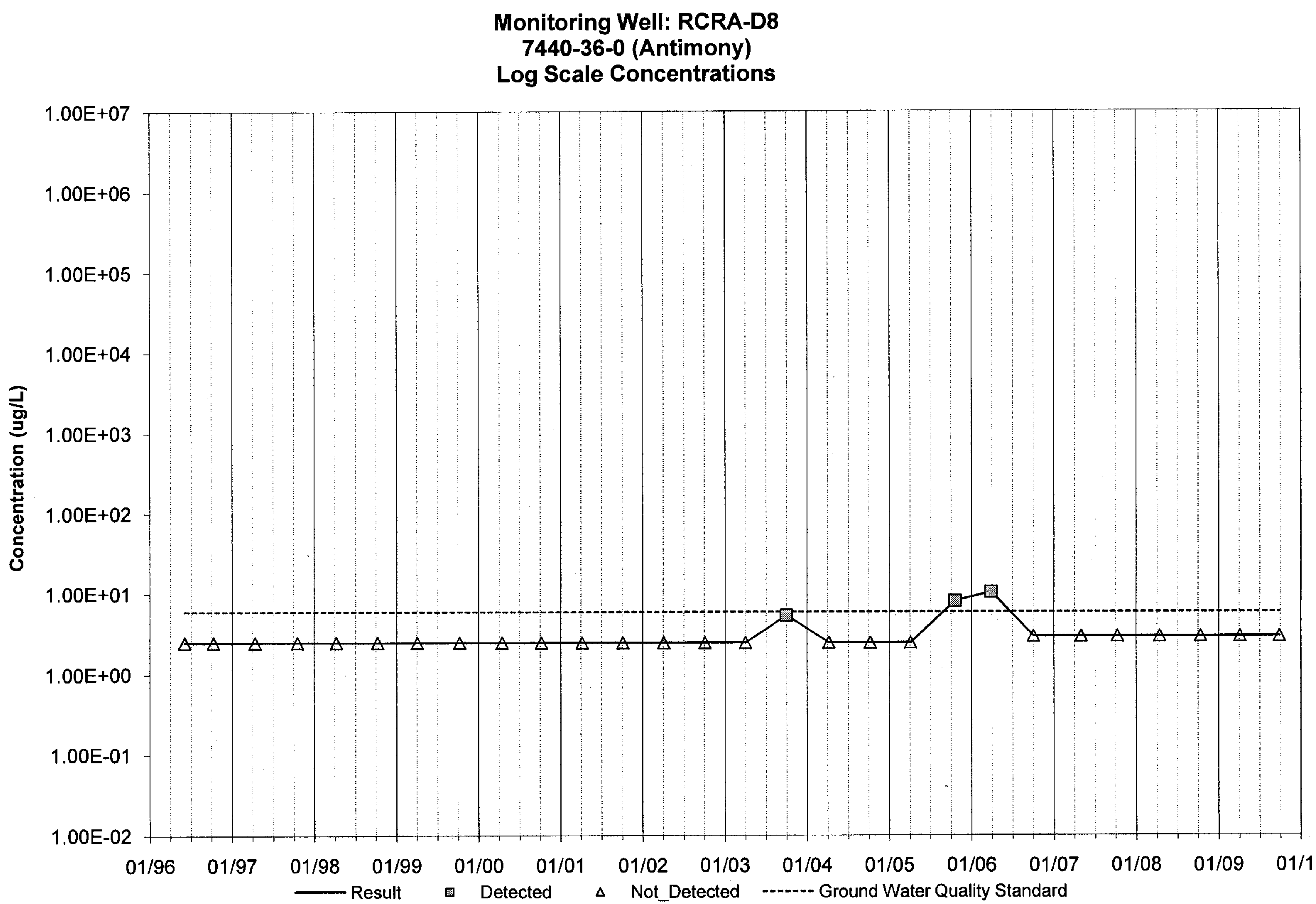
Monitoring Well: RCRA-D5
7440-36-0 (Antimony)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D6
7440-36-0 (Antimony)
Log Scale Concentrations



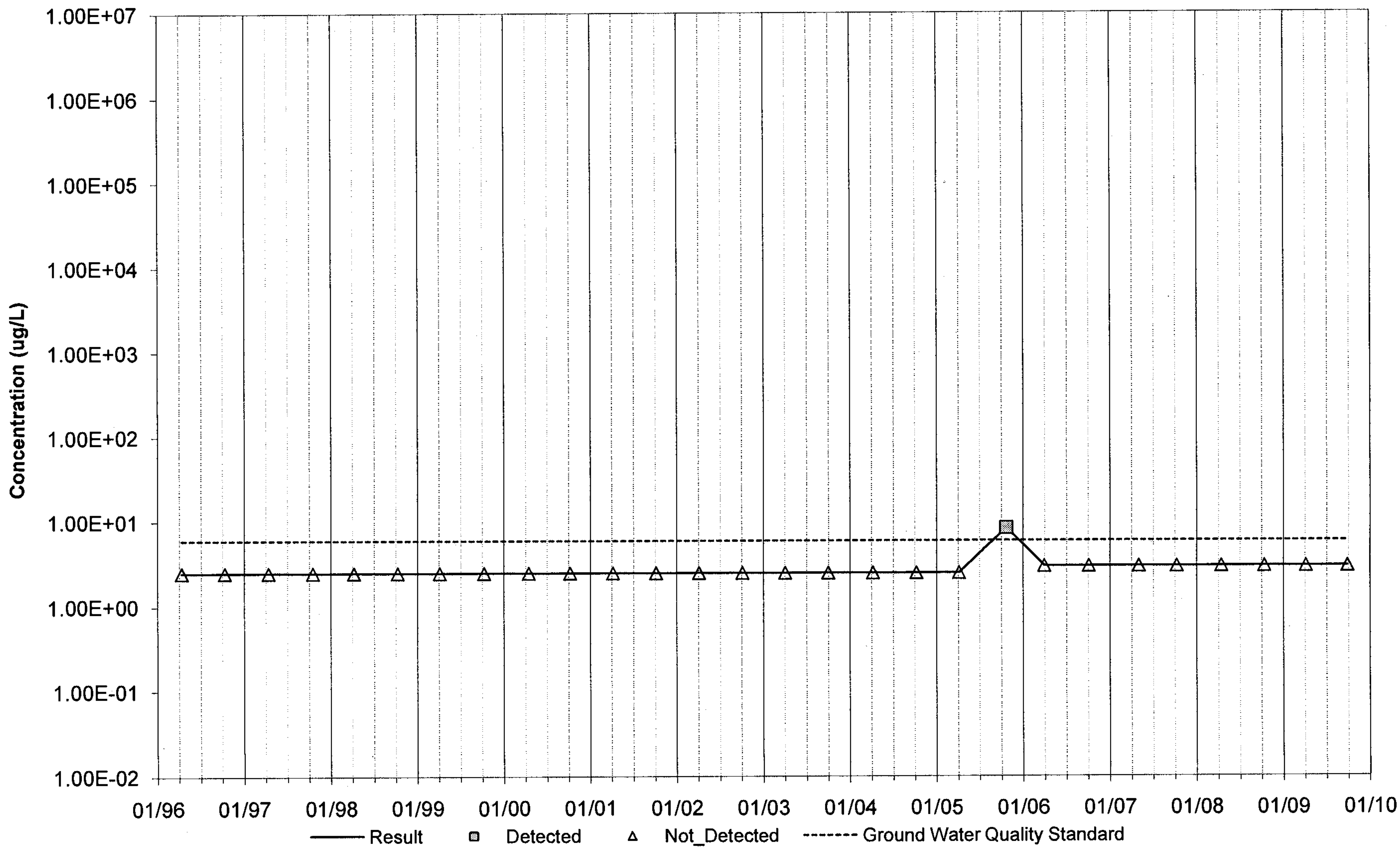
Monitoring Well: RCRA-D7
7440-36-0 (Antimony)
Log Scale Concentrations

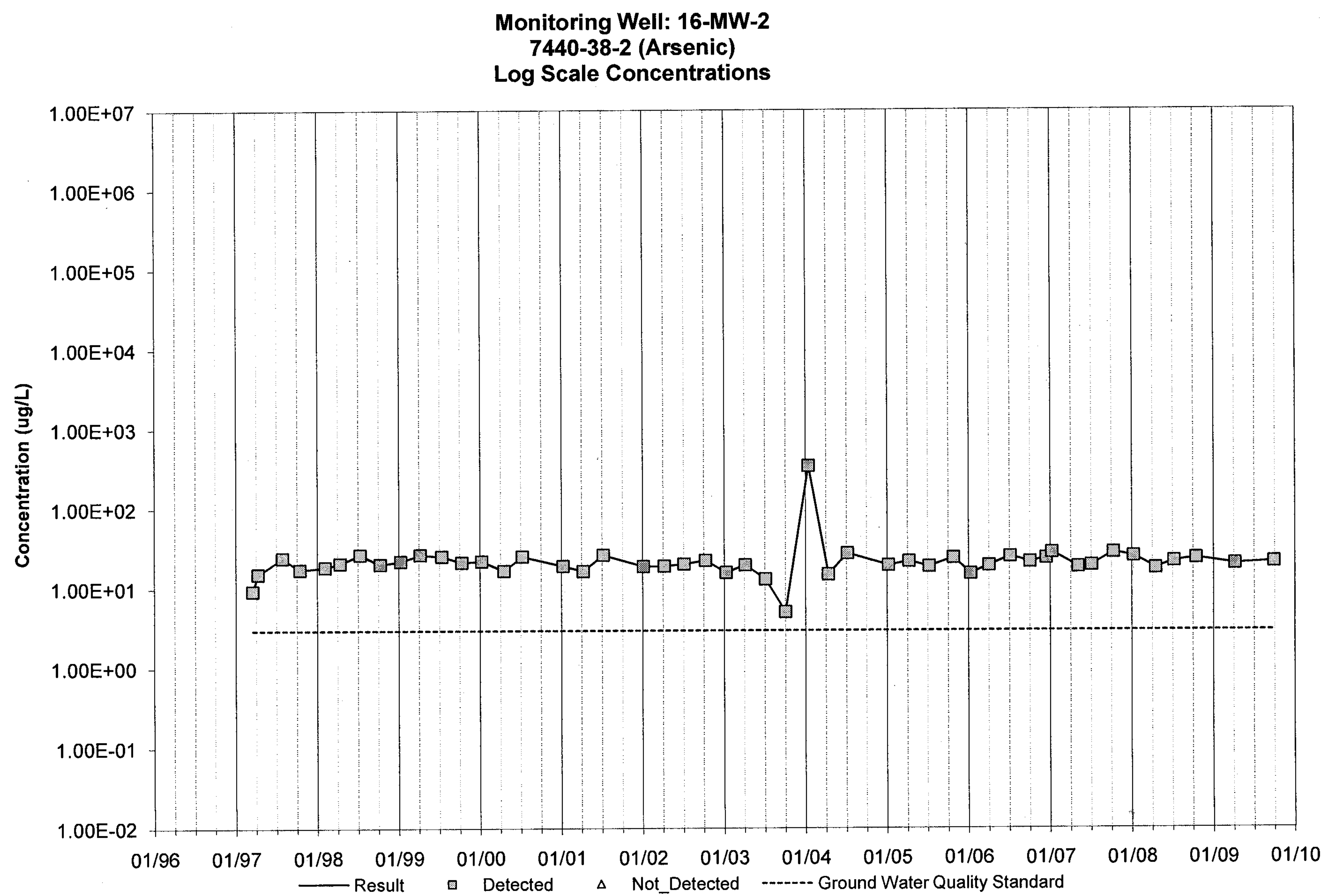




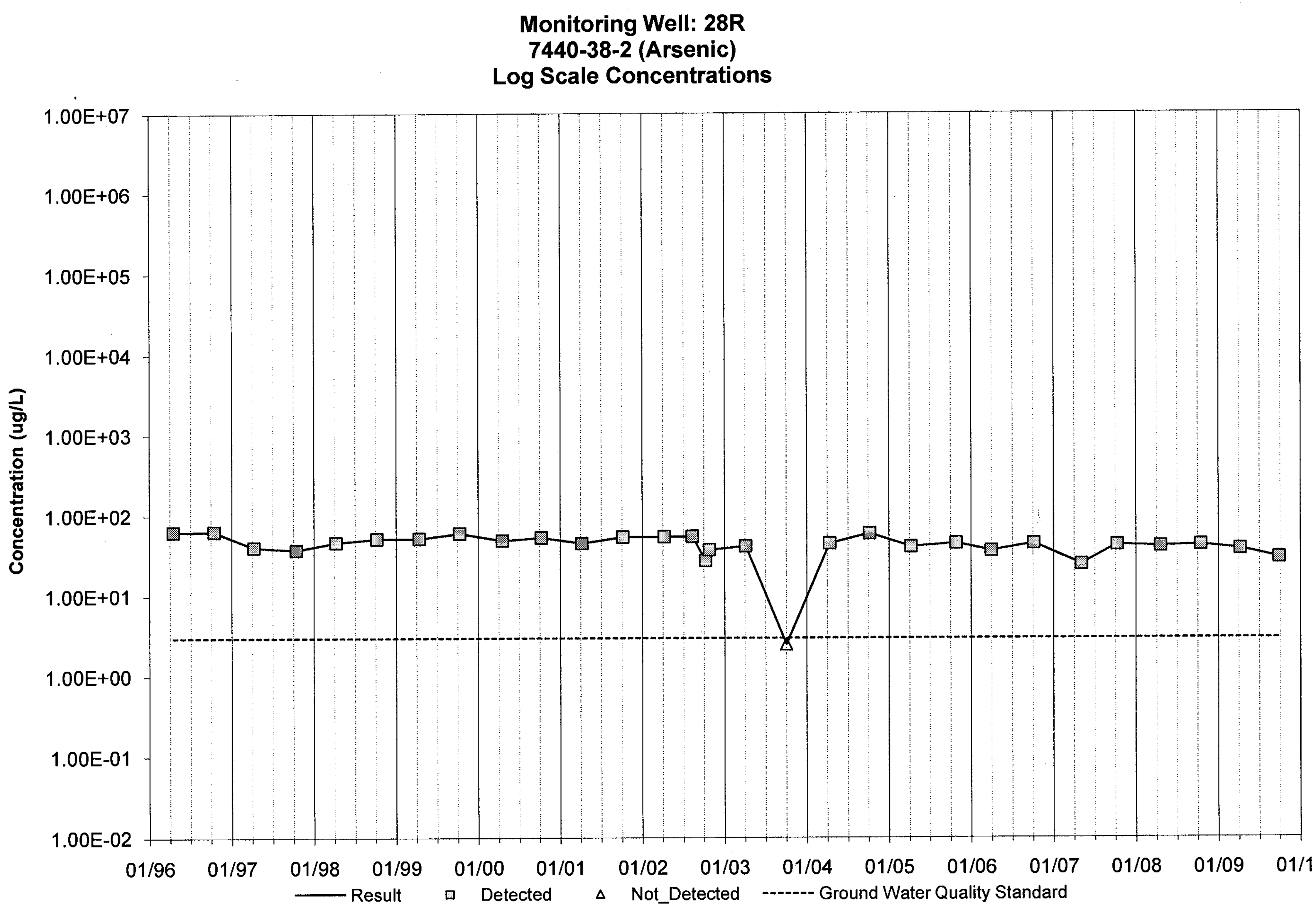
Monitoring Well: RCRA-D8
7440-36-0 (Antimony)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D9
7440-36-0 (Antimony)
Log Scale Concentrations

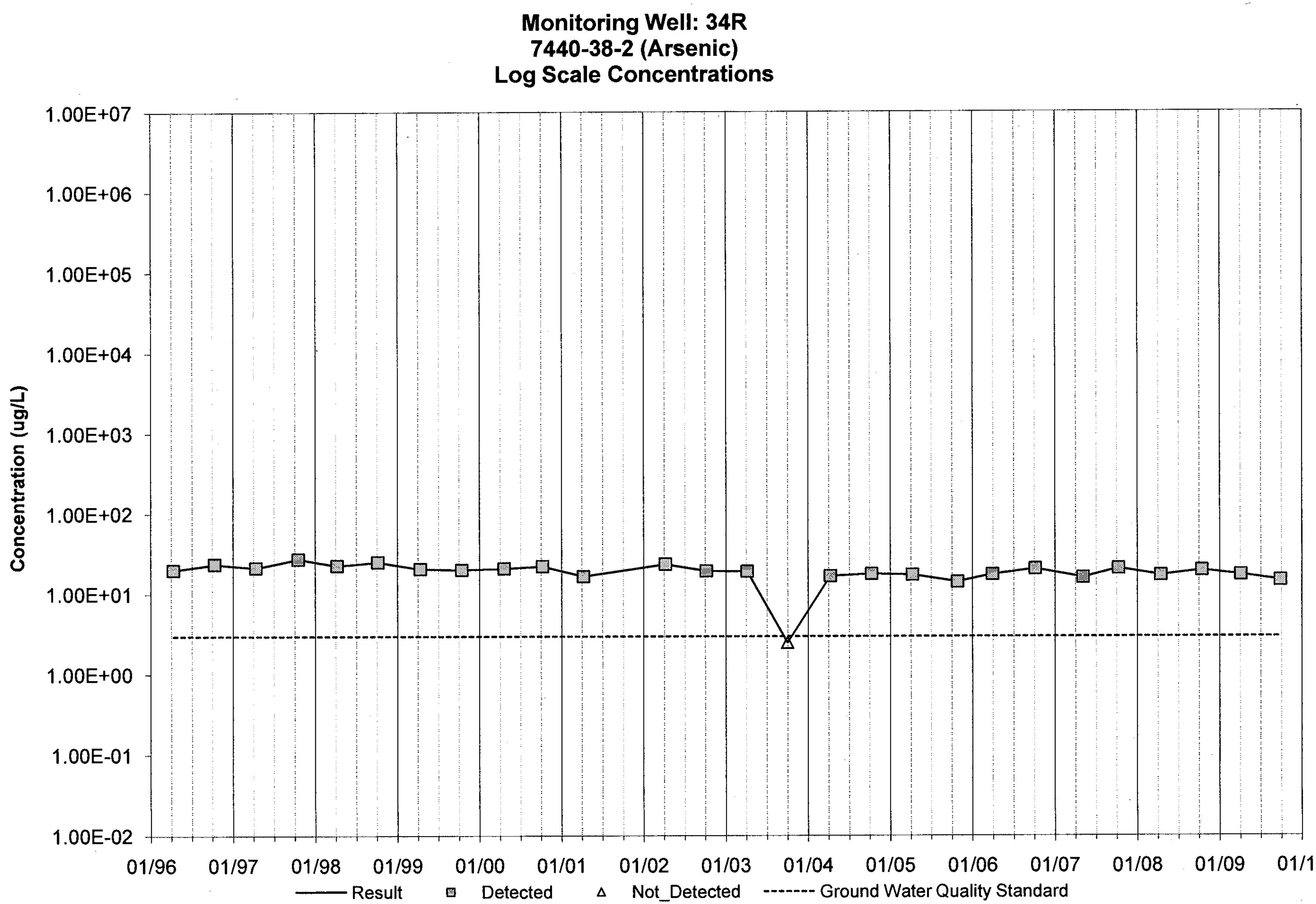




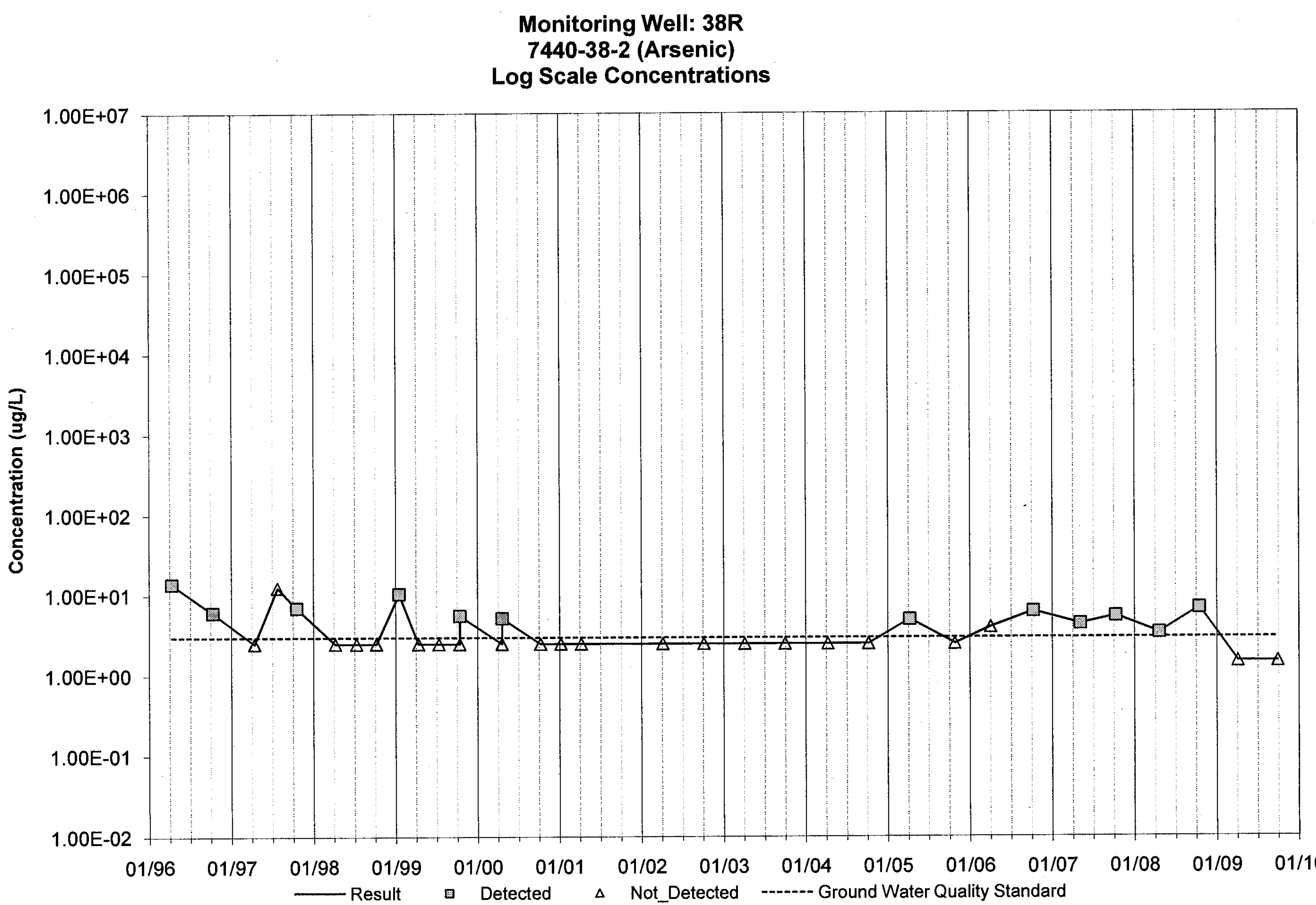
Monitoring Well: 16-MW-2
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



Monitoring Well: 28R
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

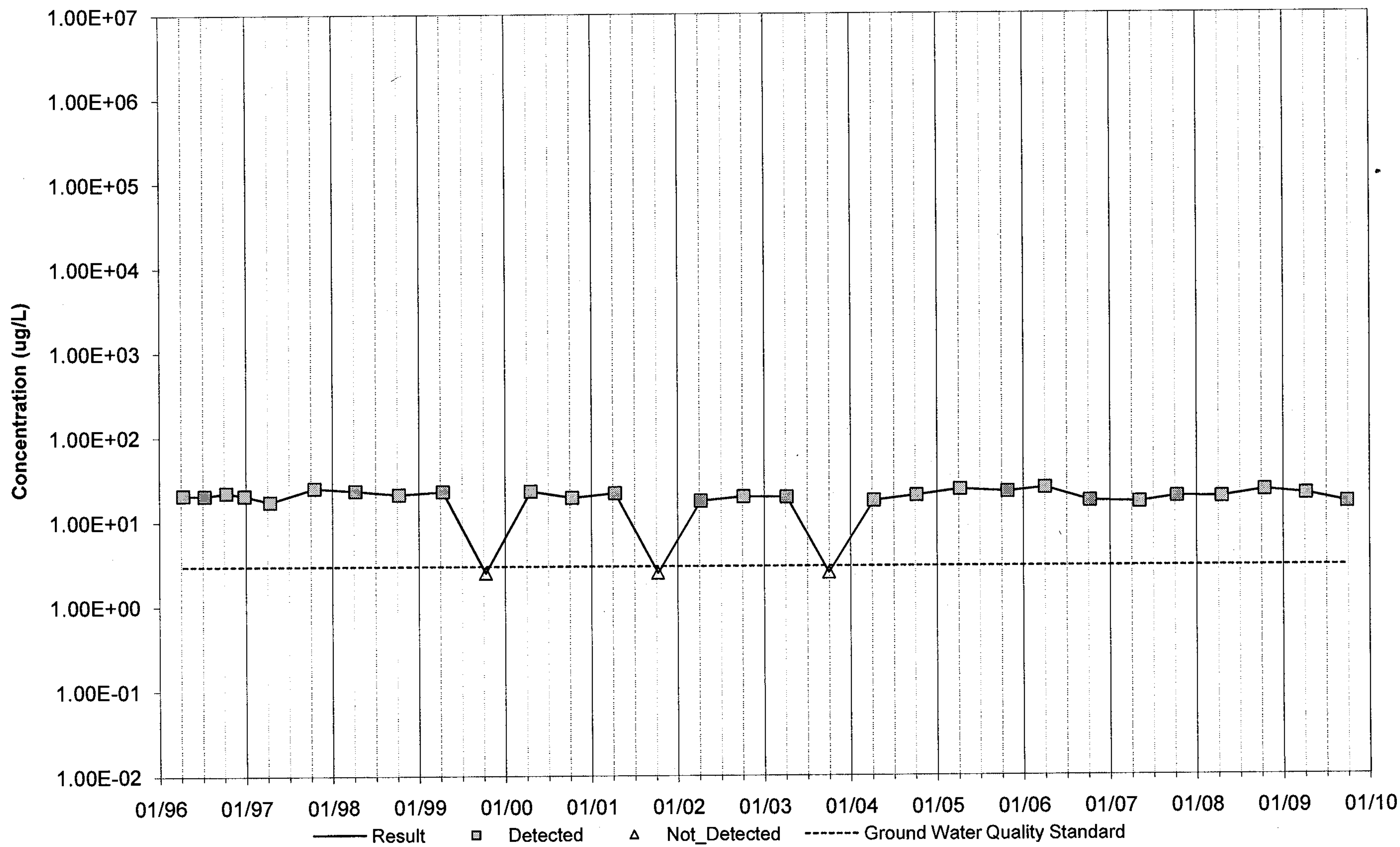


Monitoring Well: 34R
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

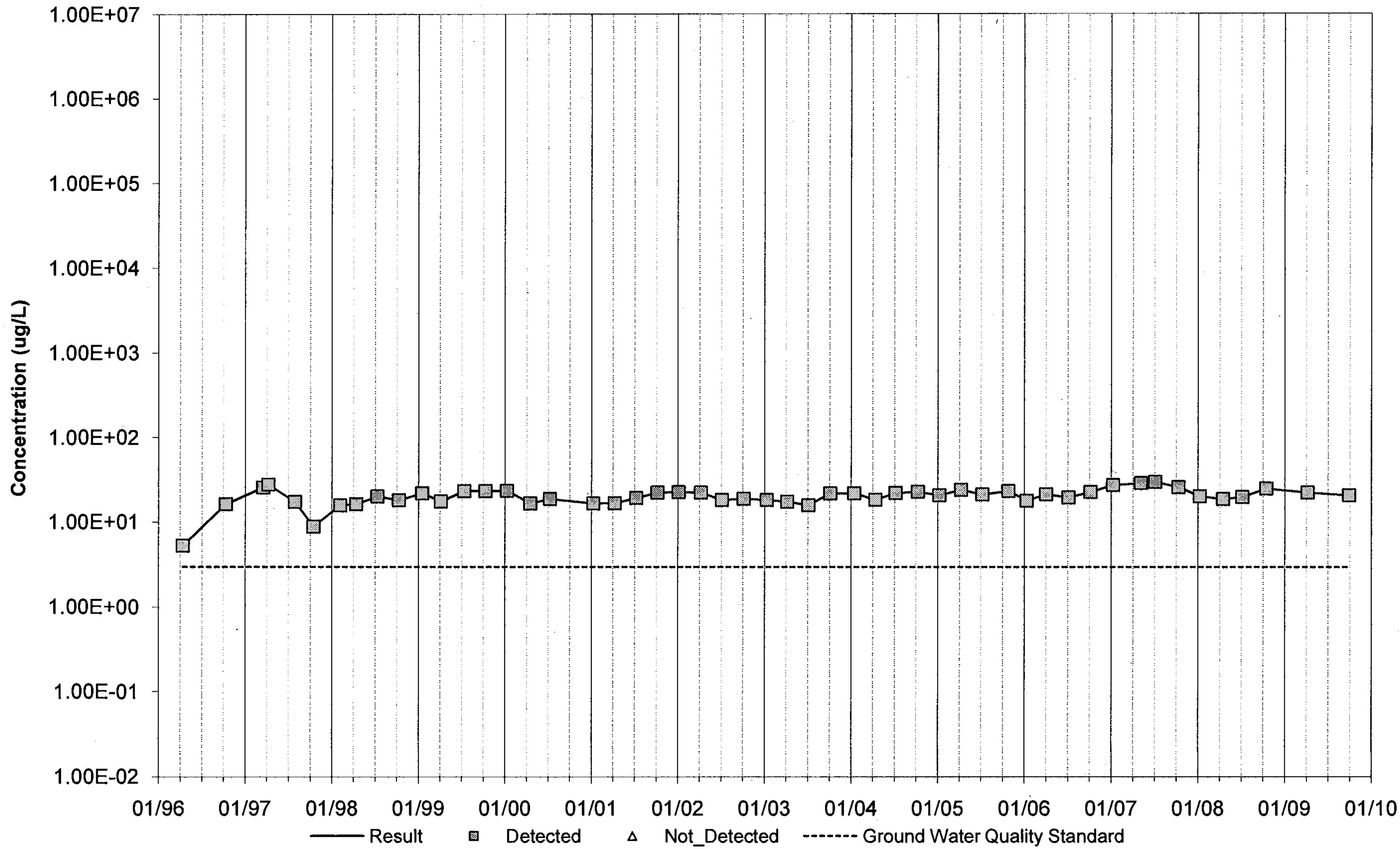


Monitoring Well: 38R
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

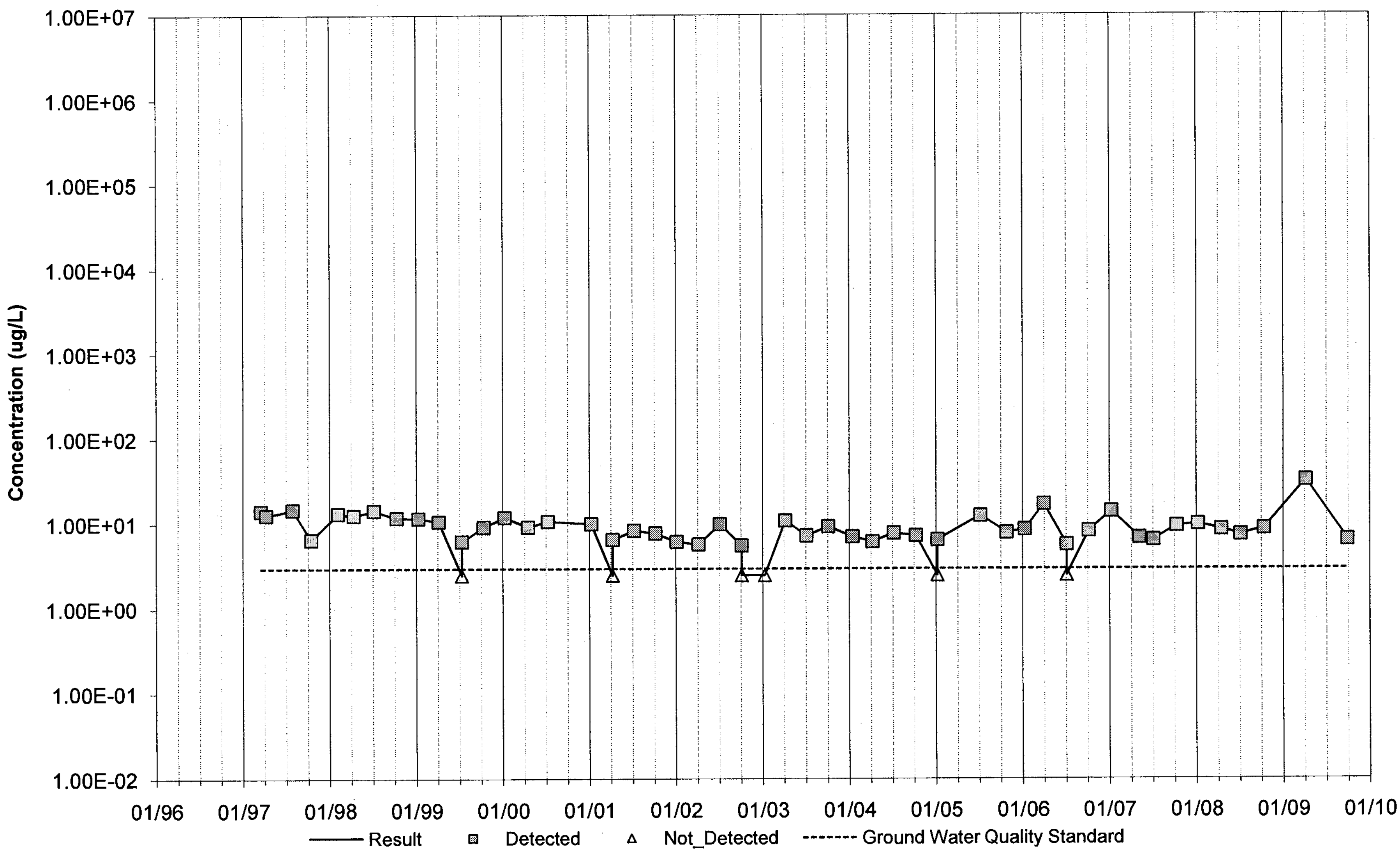
Monitoring Well: 42R
7440-38-2 (Arsenic)
Log Scale Concentrations



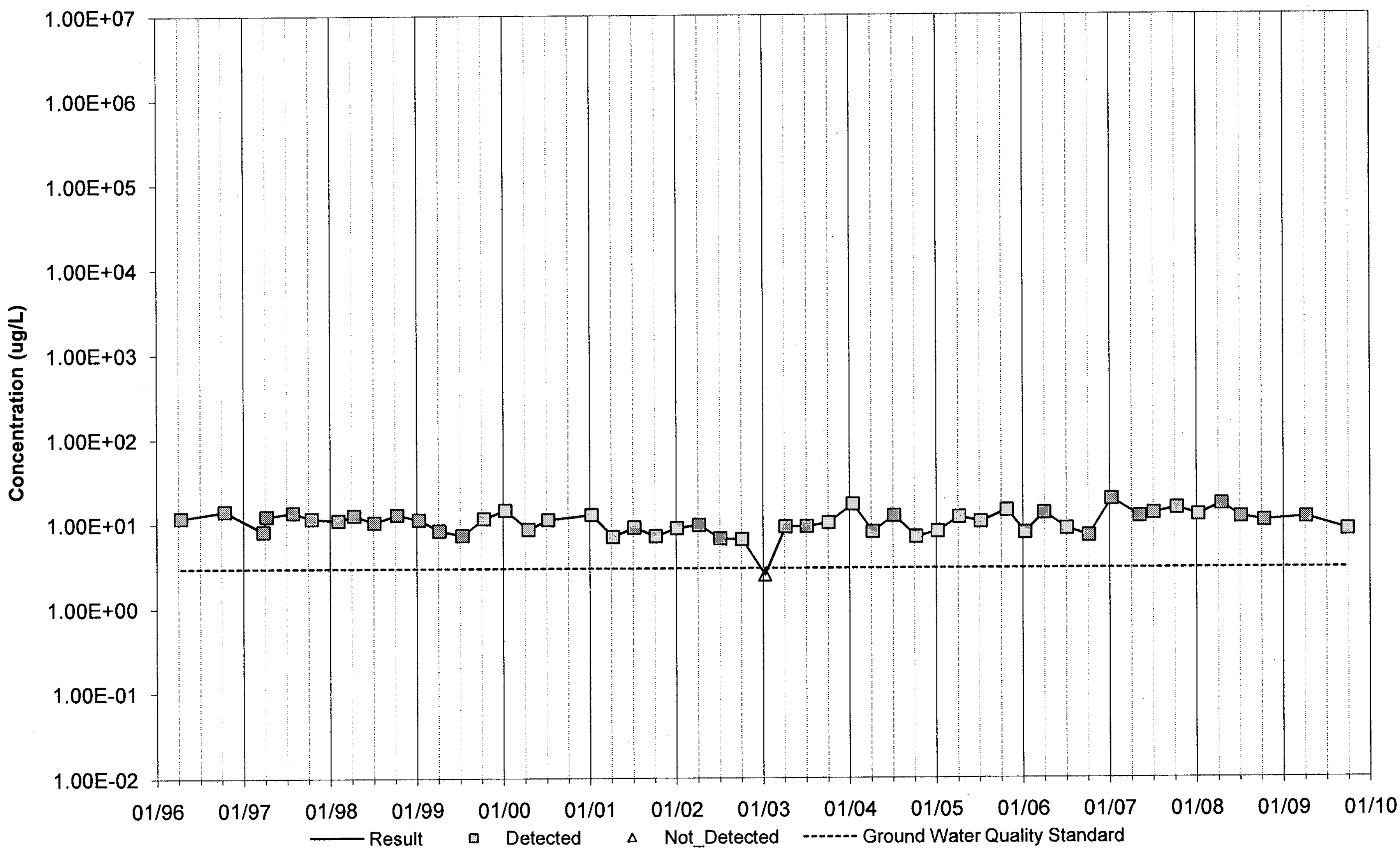
Monitoring Well: AAA
7440-38-2 (Arsenic)
Log Scale Concentrations

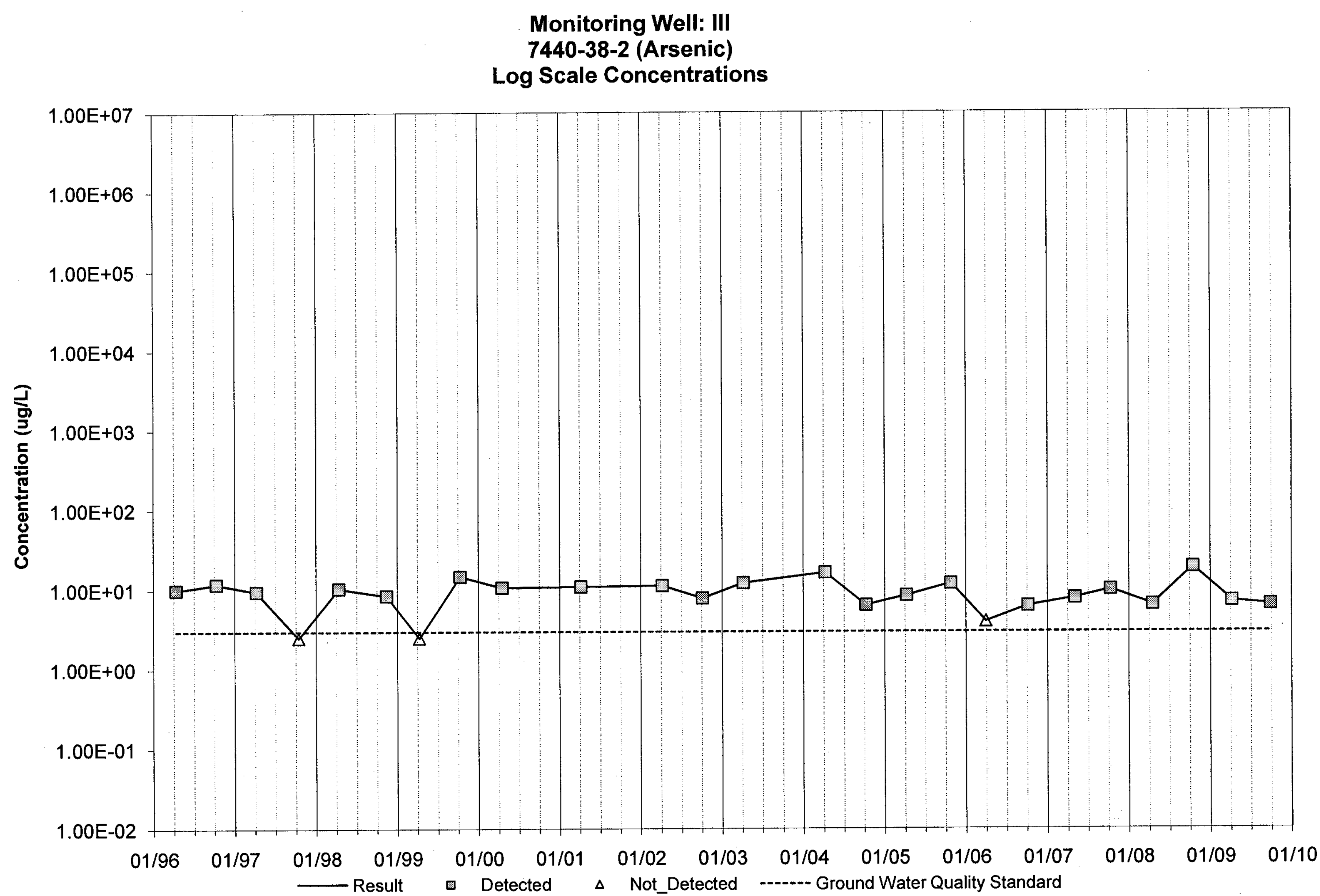


Monitoring Well: CCC-R
7440-38-2 (Arsenic)
Log Scale Concentrations

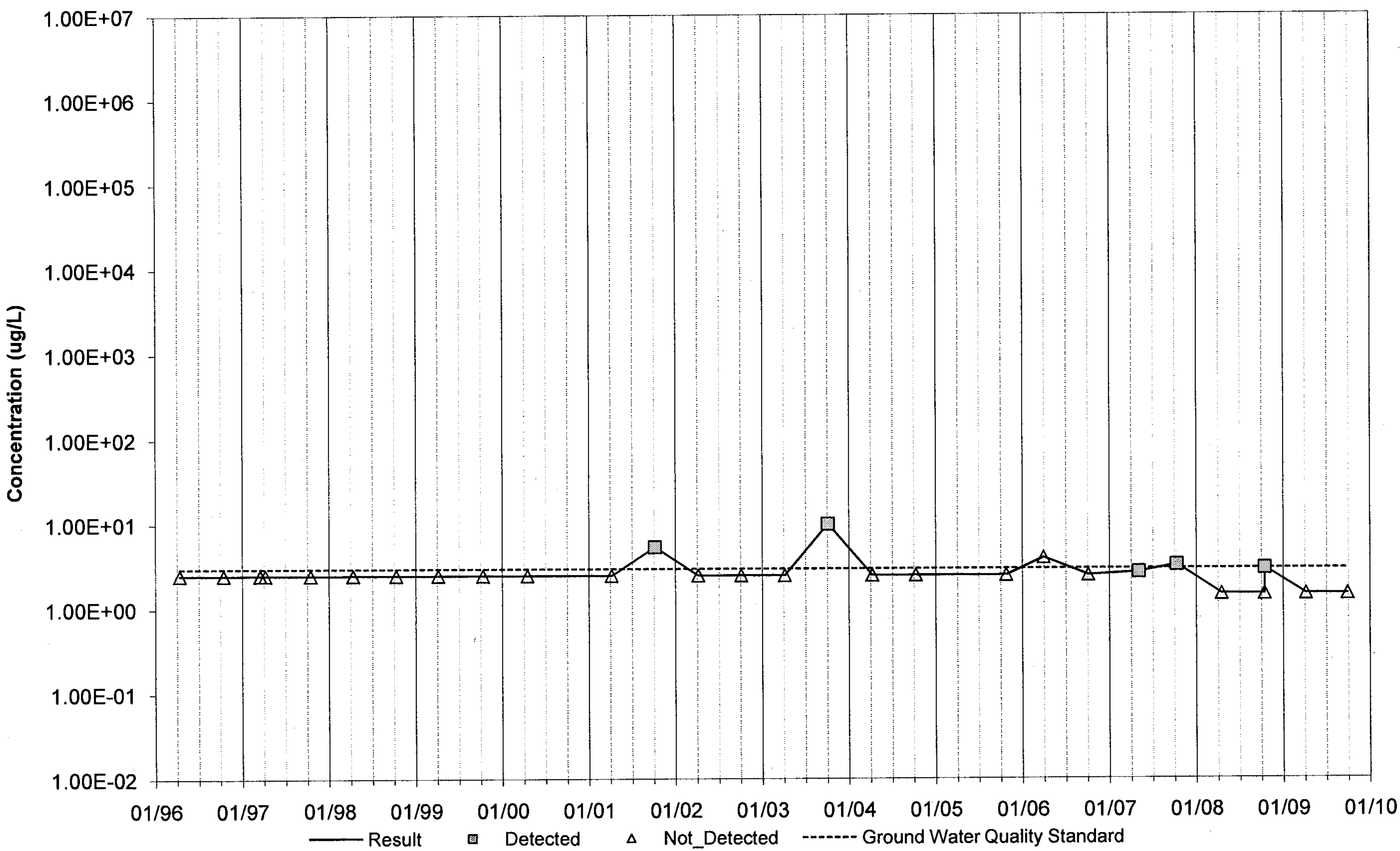


Monitoring Well: EEE-R
7440-38-2 (Arsenic)
Log Scale Concentrations

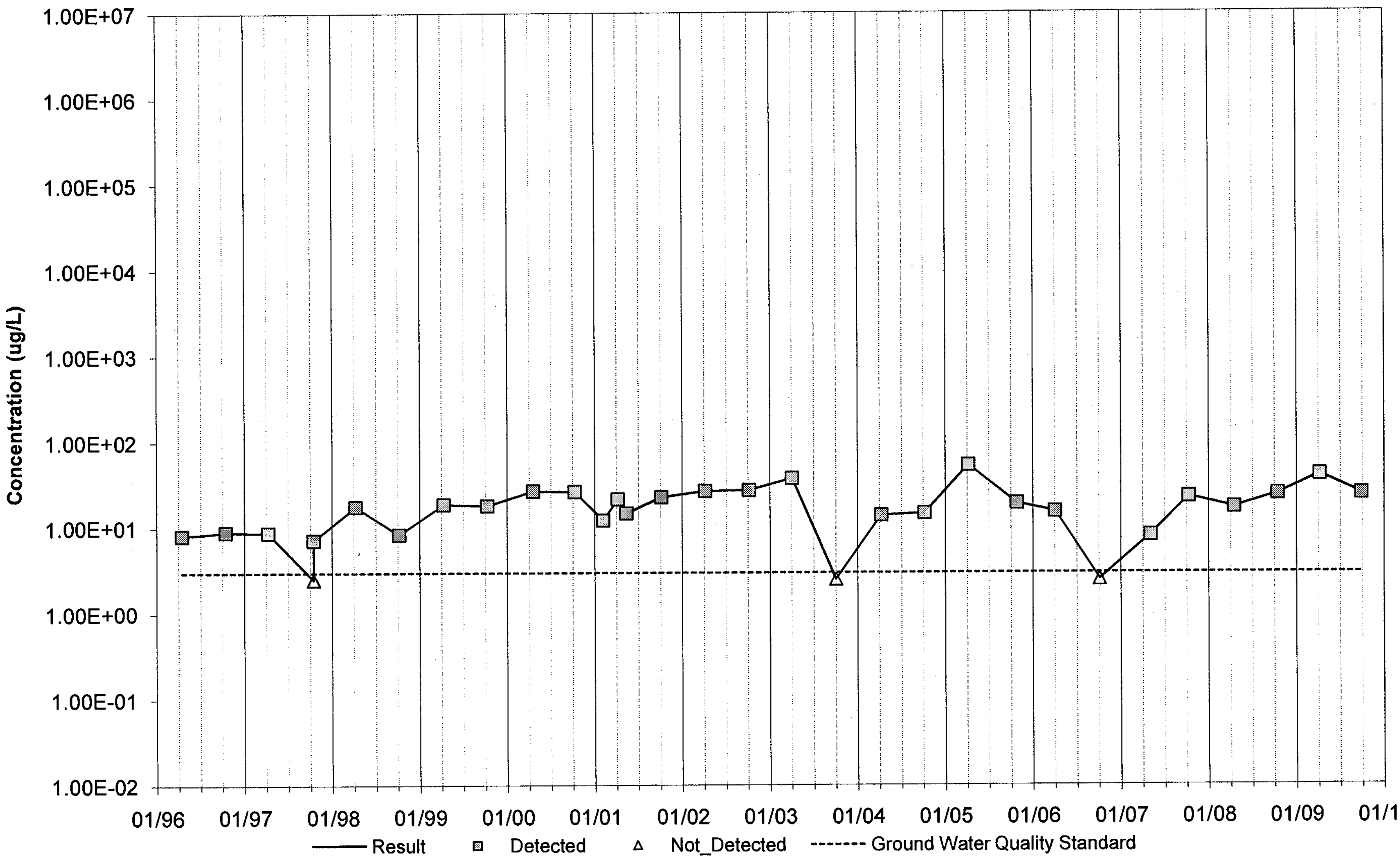



Monitoring Well: III
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

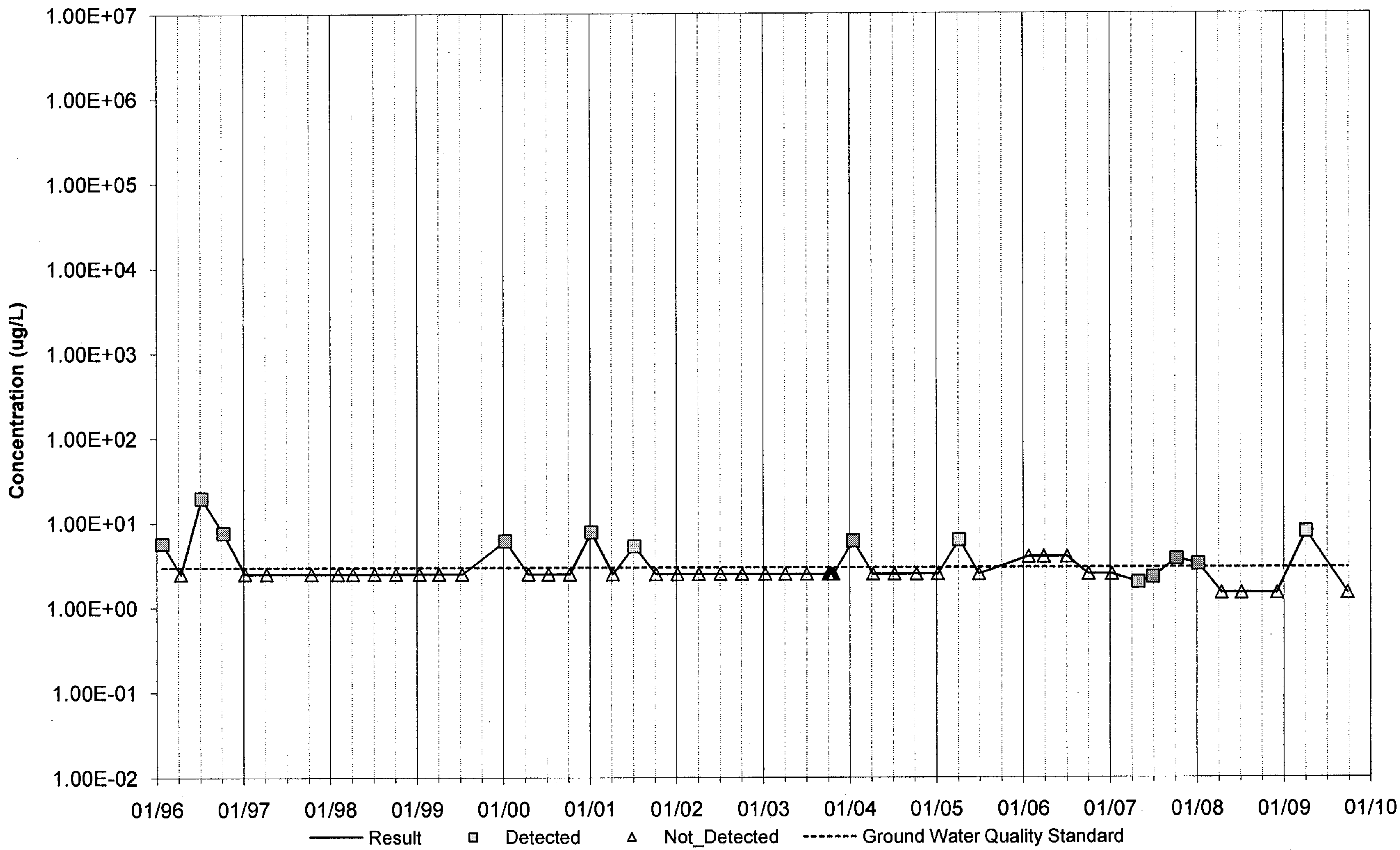
Monitoring Well: KKK
7440-38-2 (Arsenic)
Log Scale Concentrations

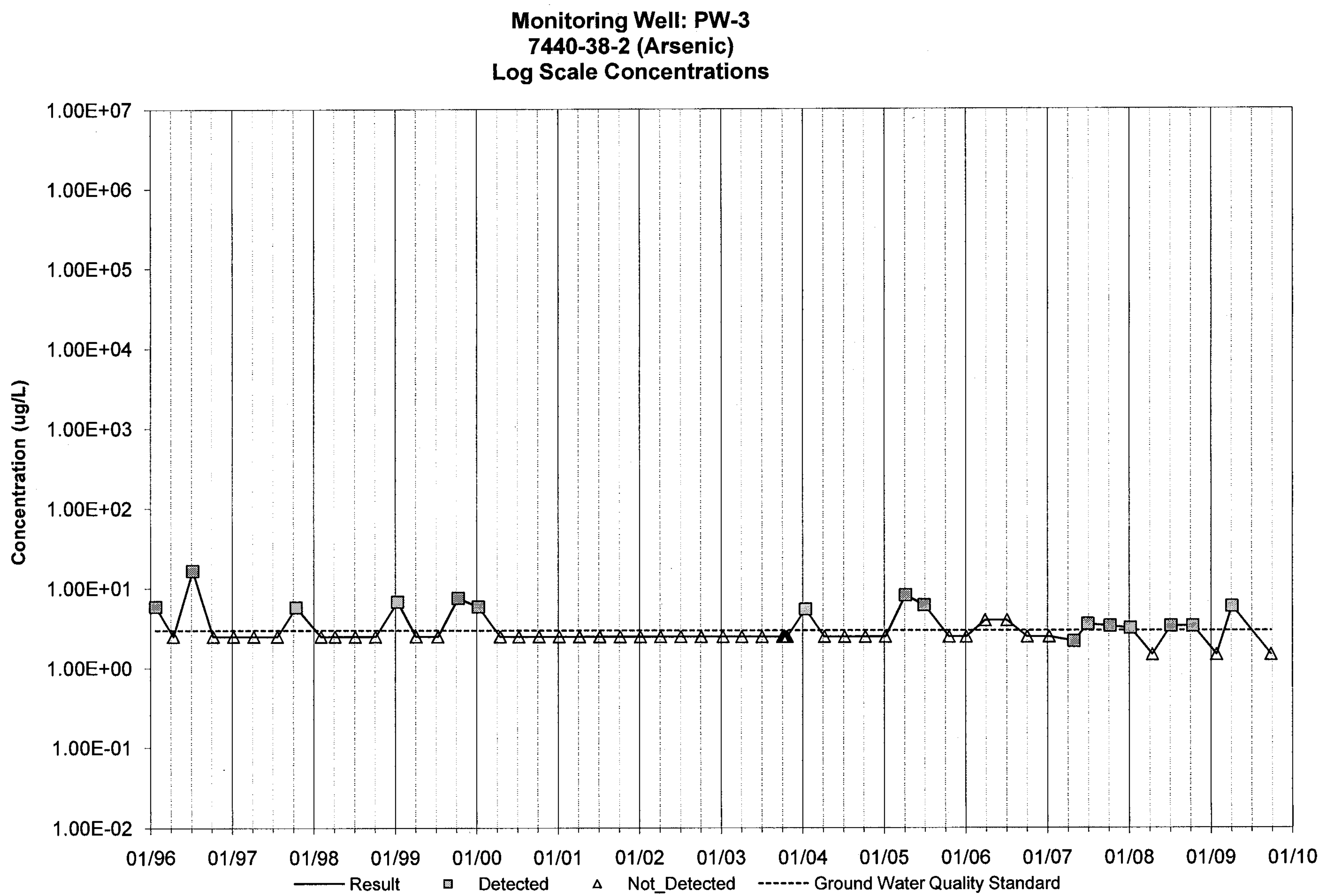


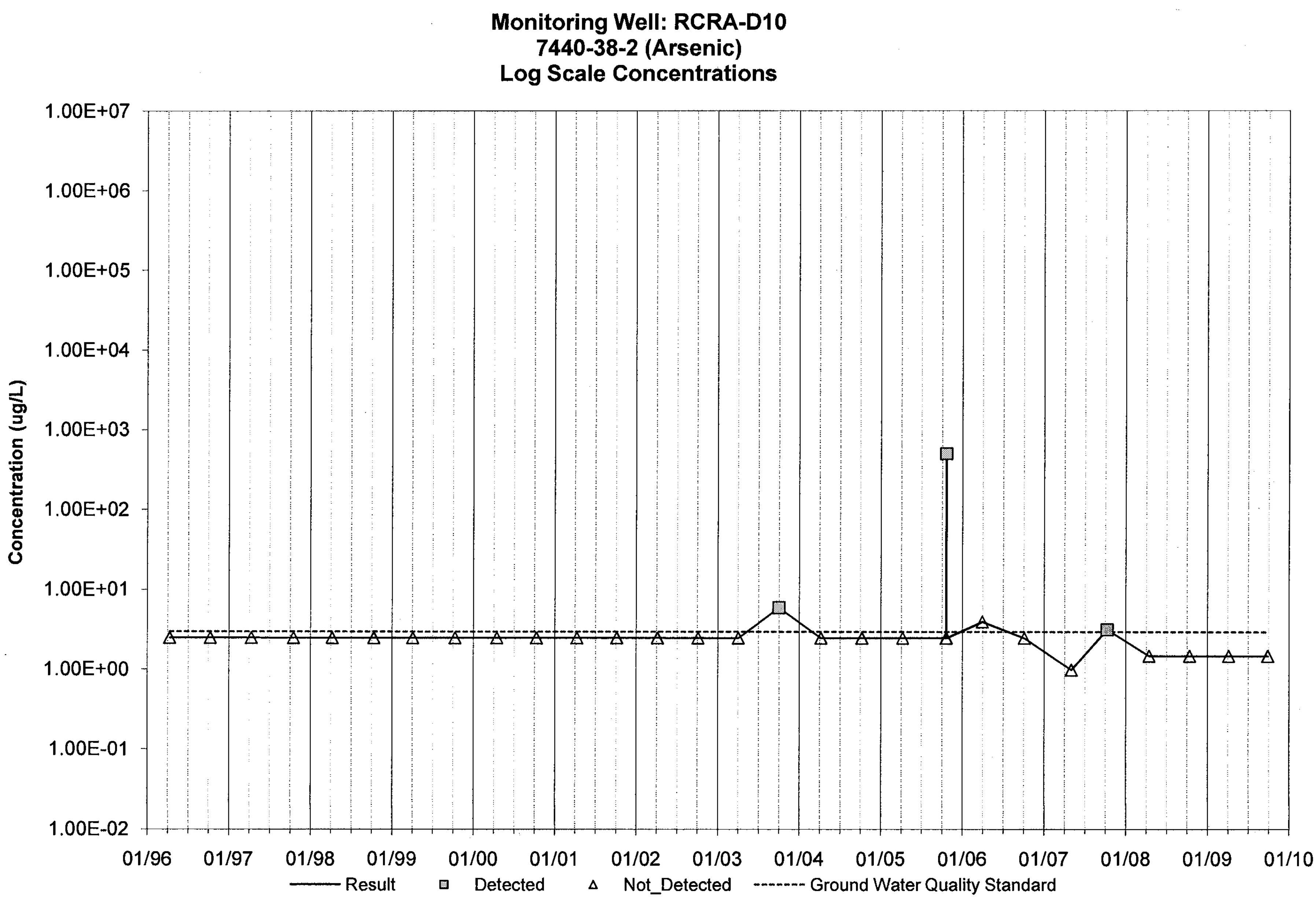
Monitoring Well: MW-2
7440-38-2 (Arsenic)
Log Scale Concentrations



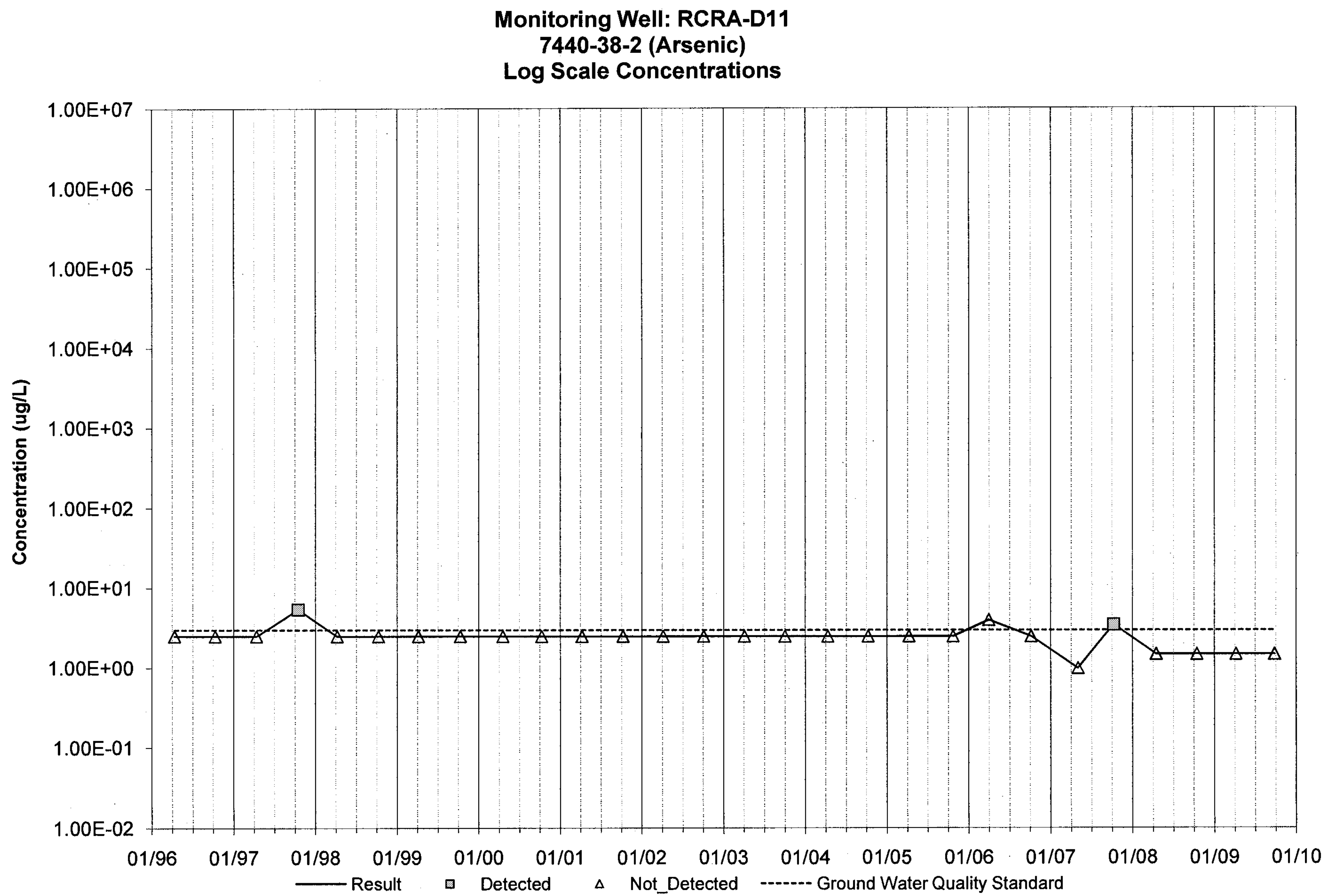
Monitoring Well: PW-2
7440-38-2 (Arsenic)
Log Scale Concentrations



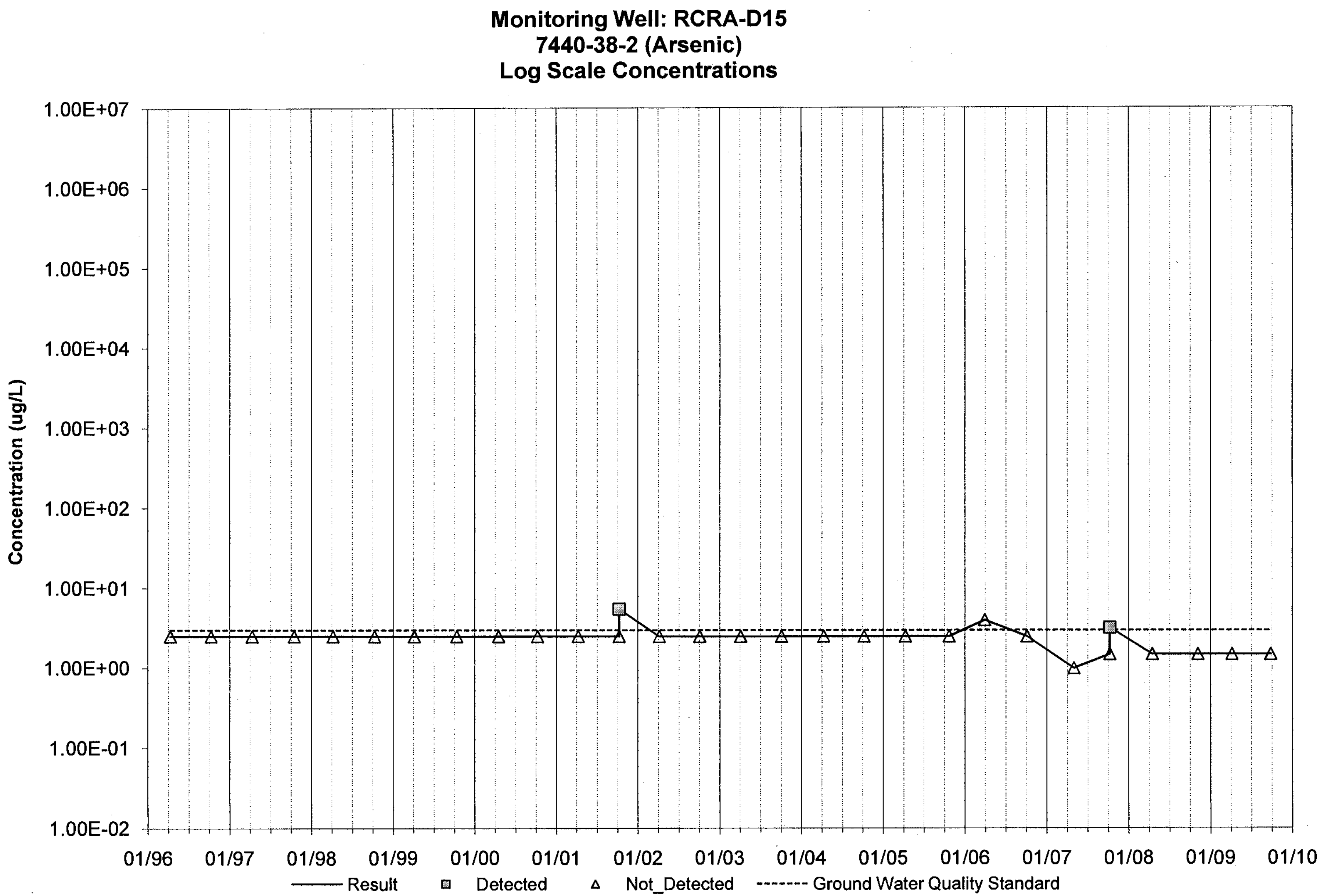

Monitoring Well: PW-3
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



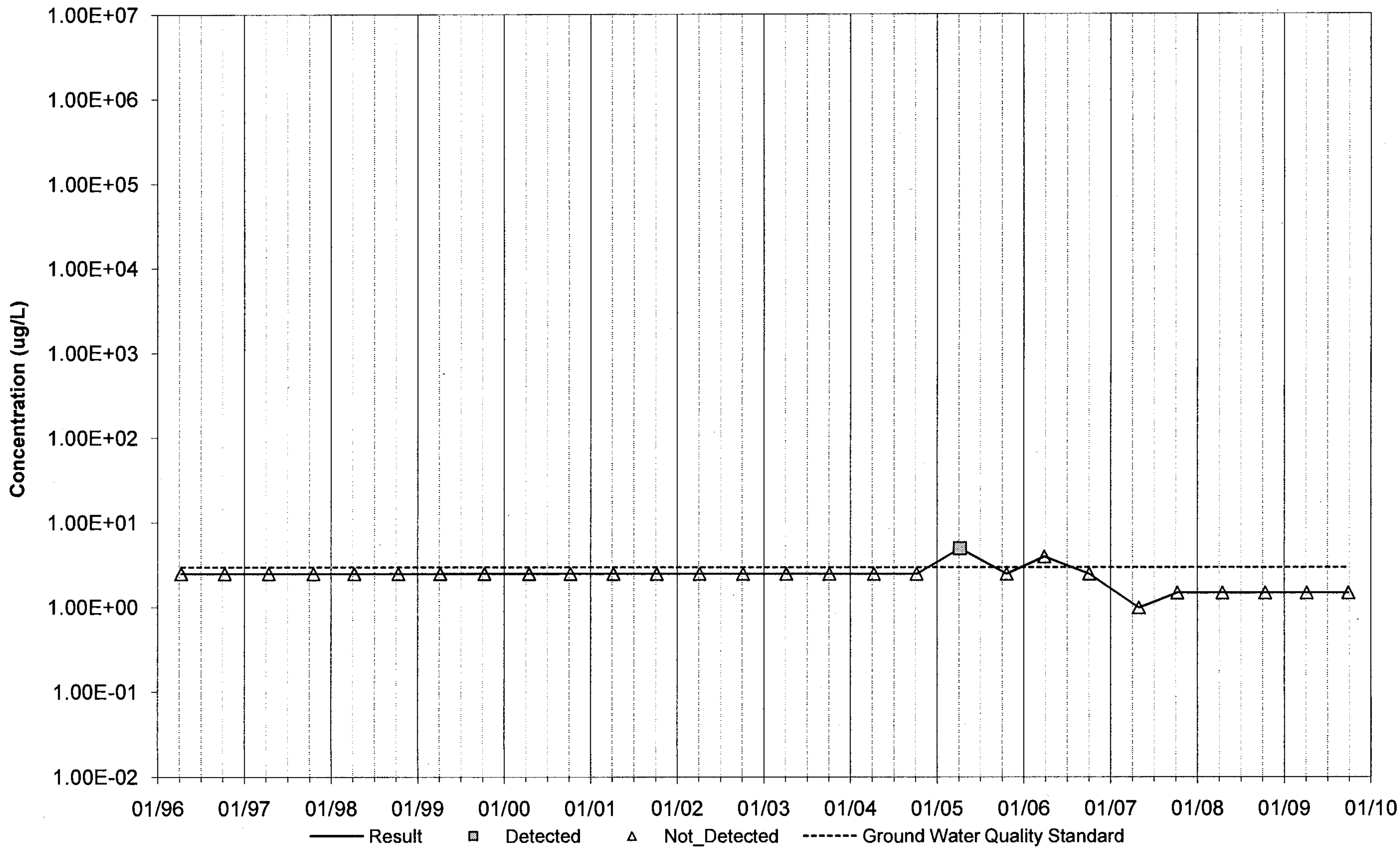
Monitoring Well: RCRA-D10
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

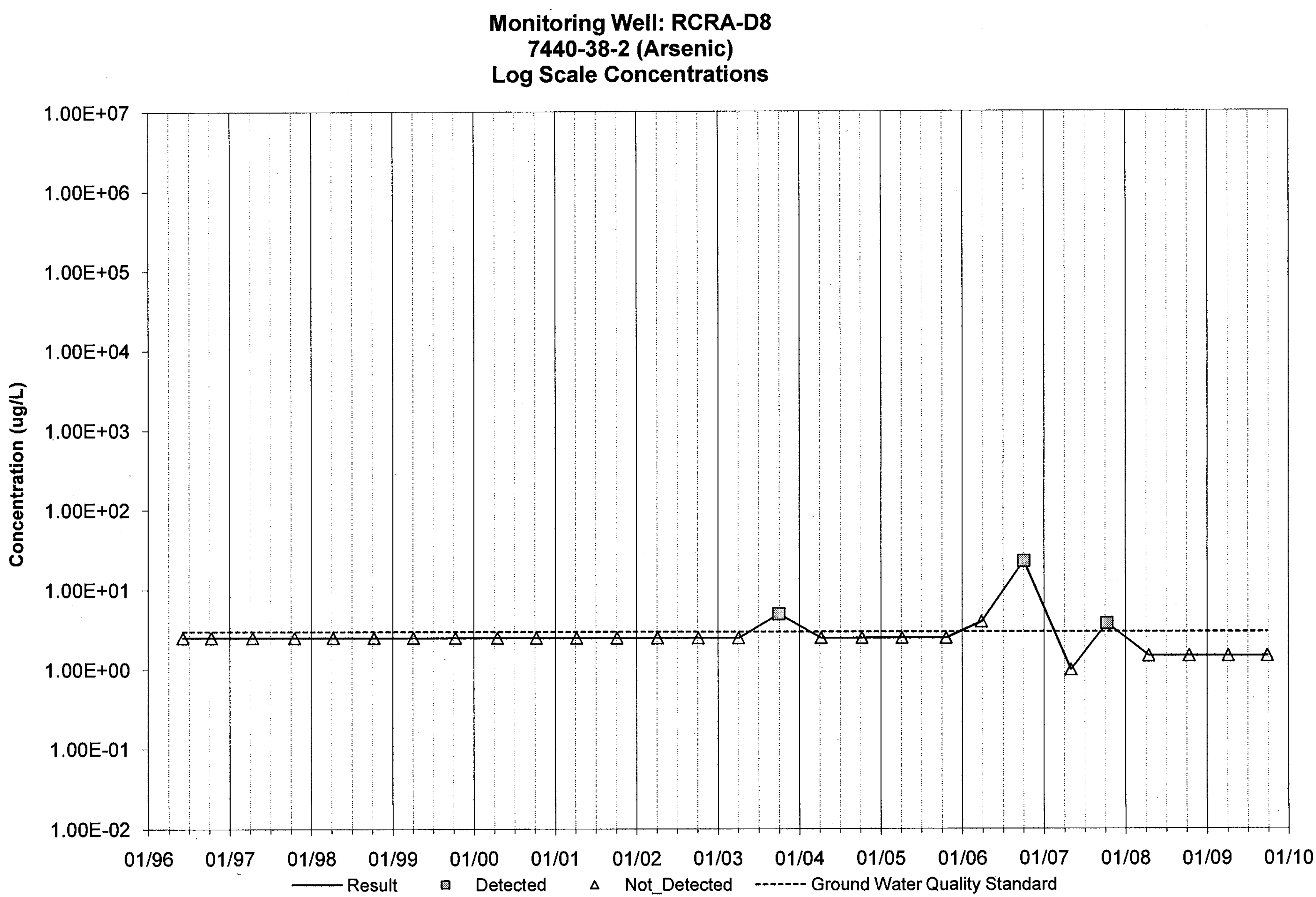


Monitoring Well: RCRA-D11
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: RCRA-D15
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

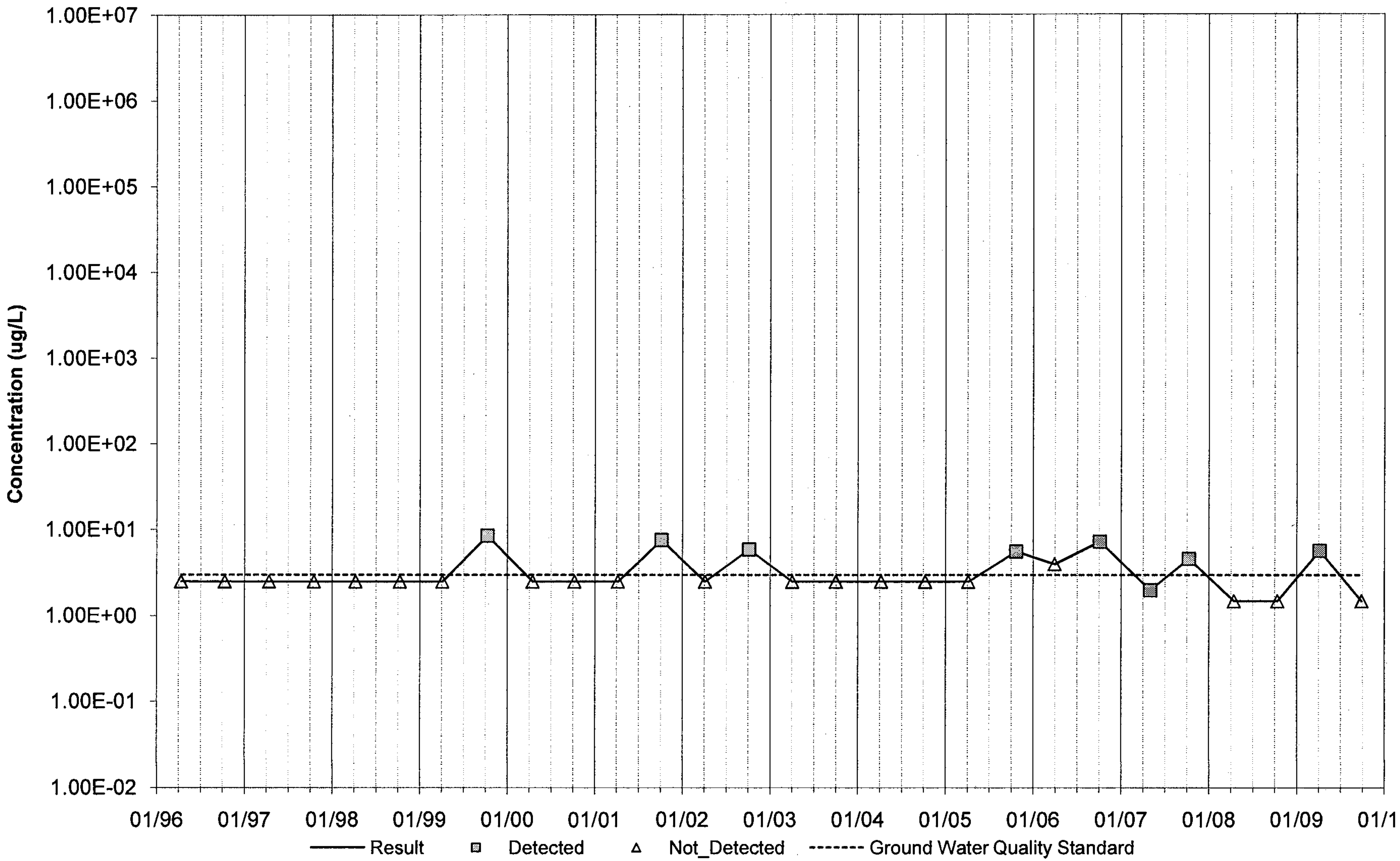
Monitoring Well: RCRA-D6
7440-38-2 (Arsenic)
Log Scale Concentrations

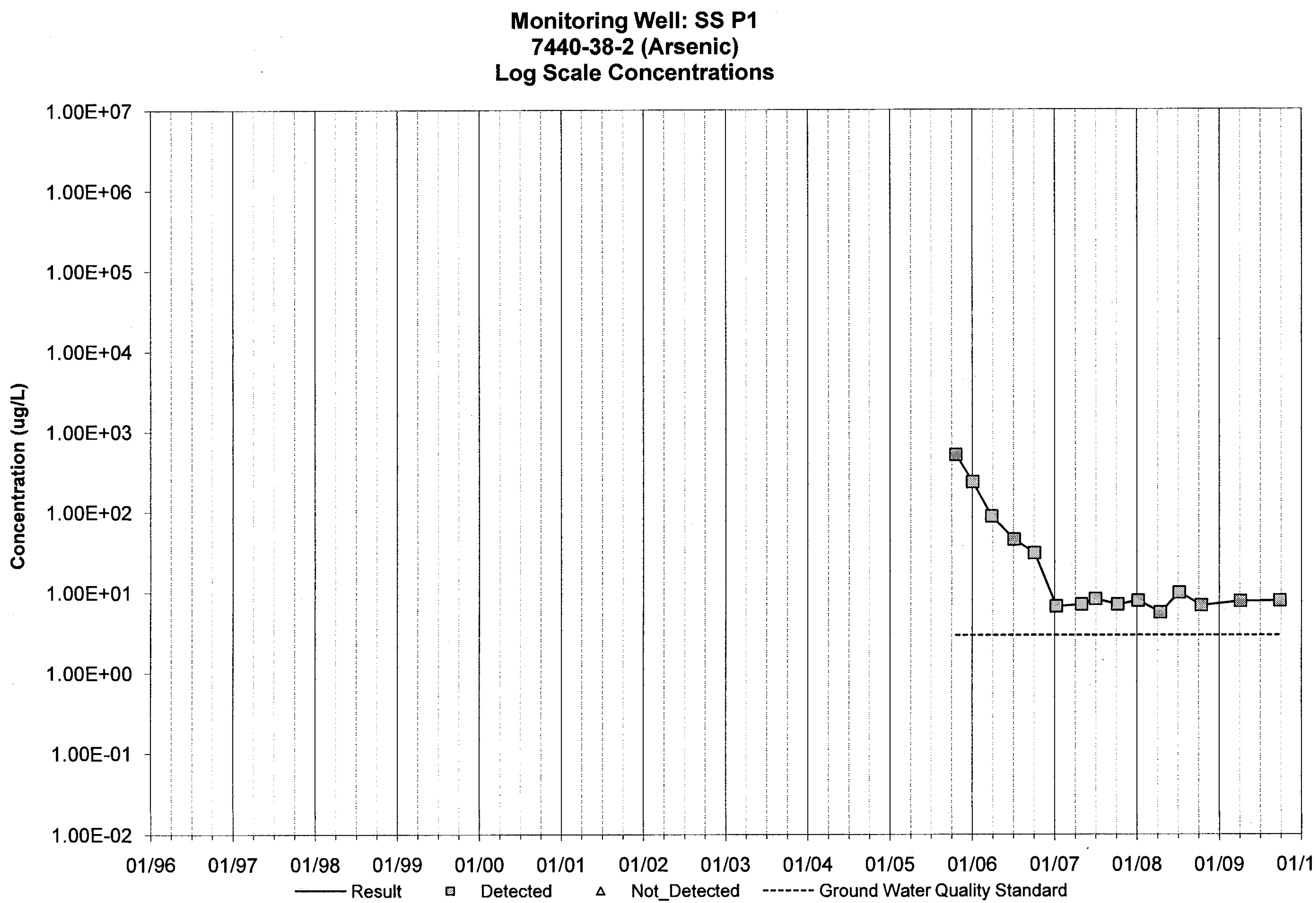




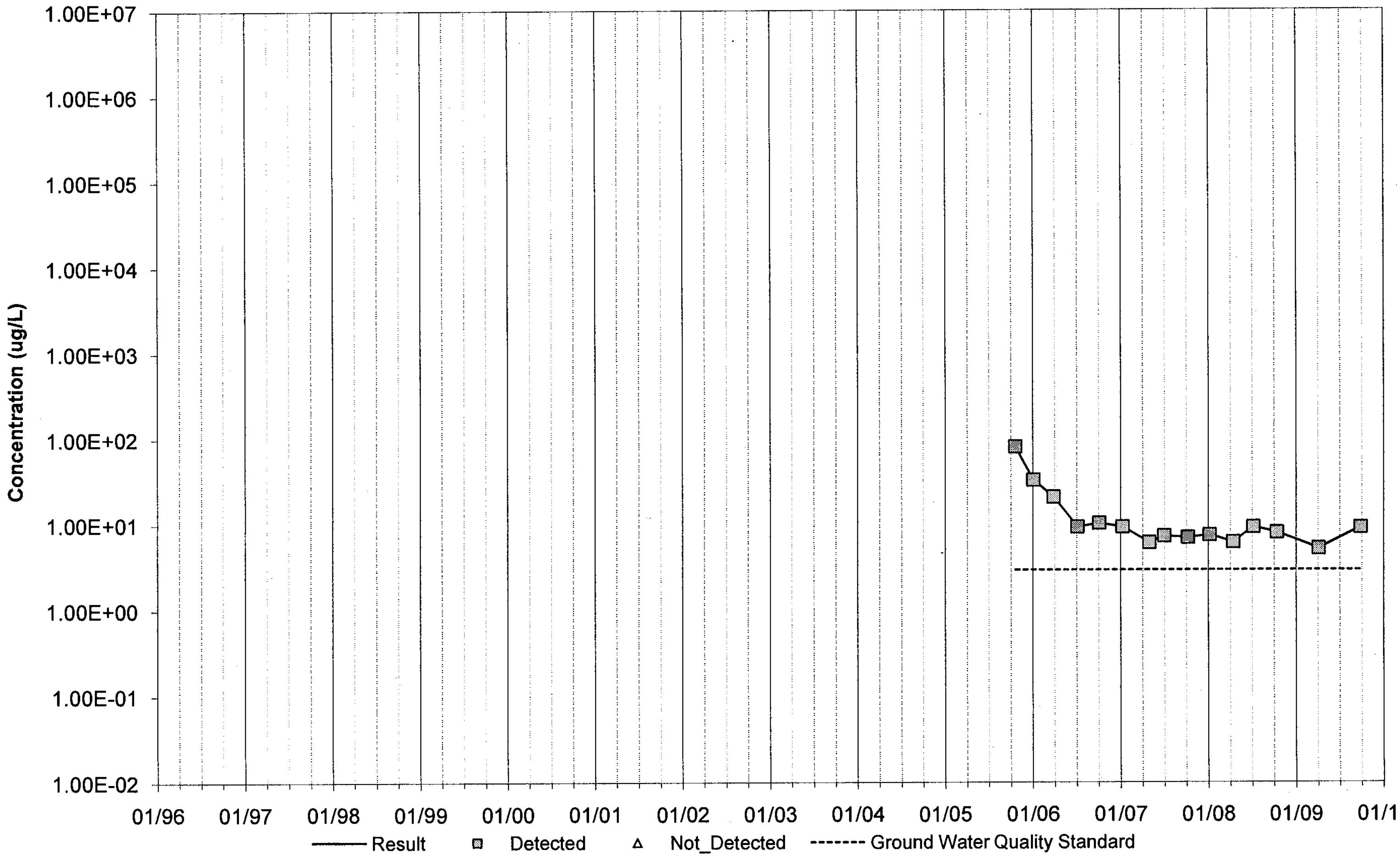
Monitoring Well: RCRA-D8
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D9
7440-38-2 (Arsenic)
Log Scale Concentrations

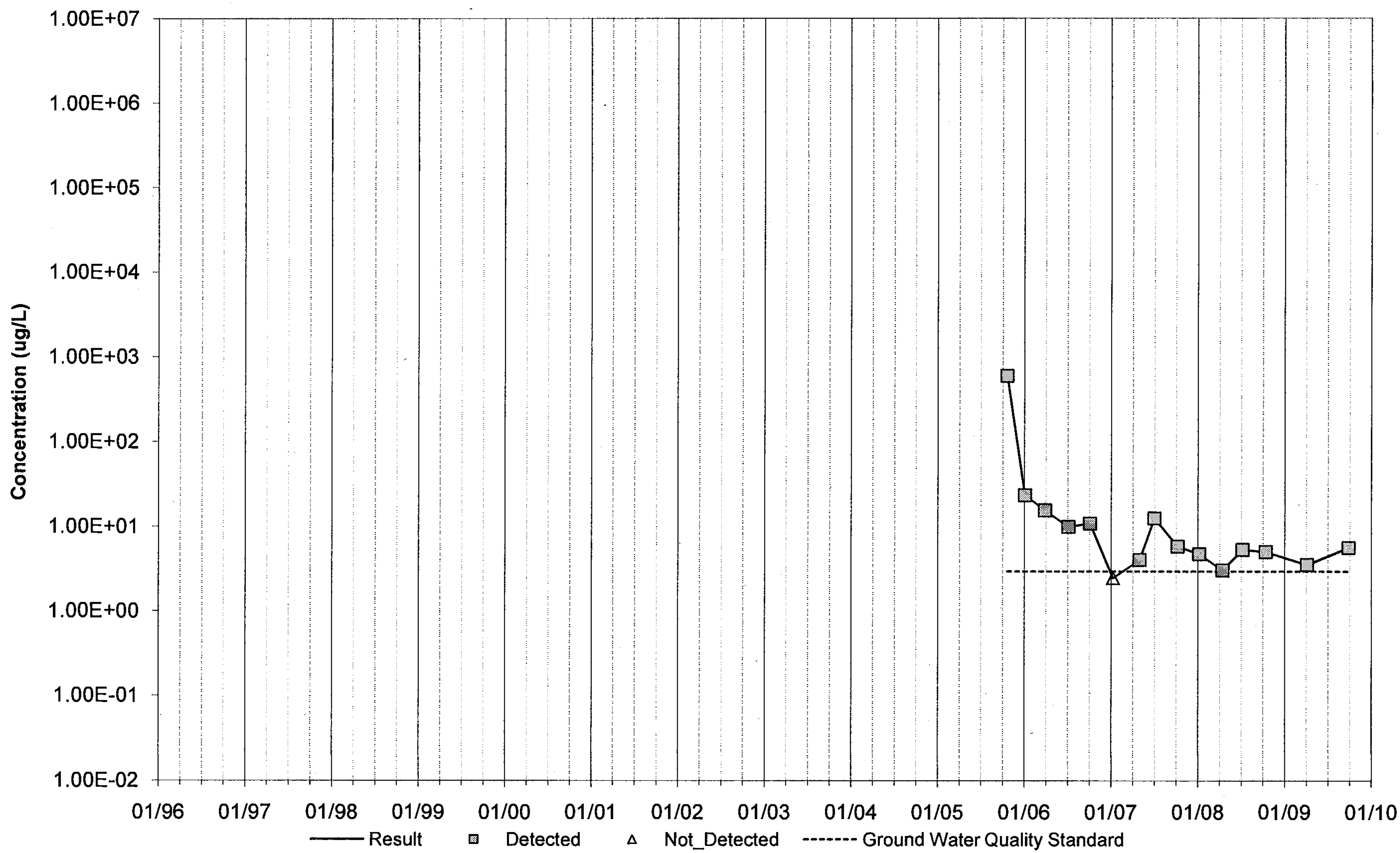



Monitoring Well: SS P1
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

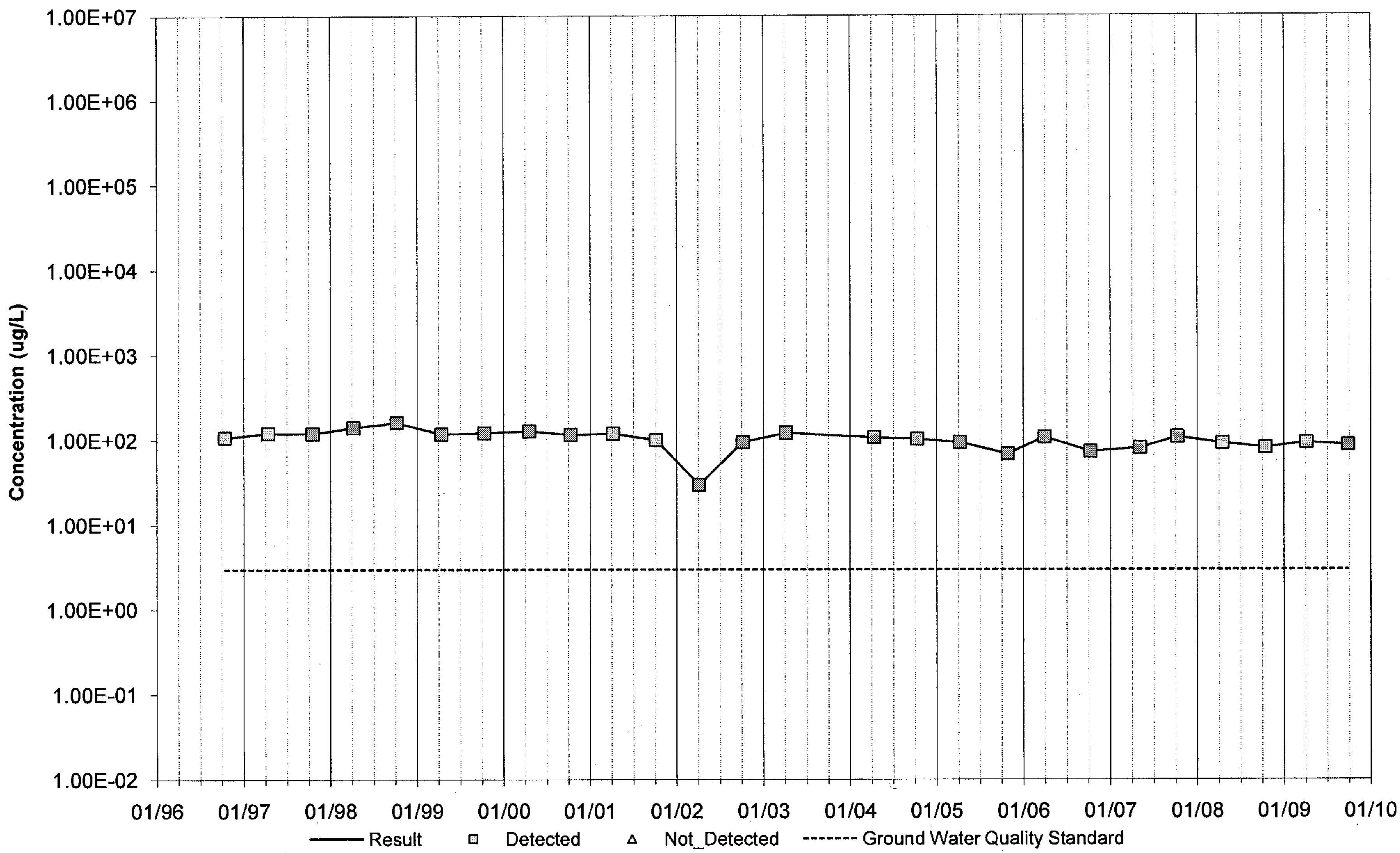
Monitoring Well: SS P2
7440-38-2 (Arsenic)
Log Scale Concentrations

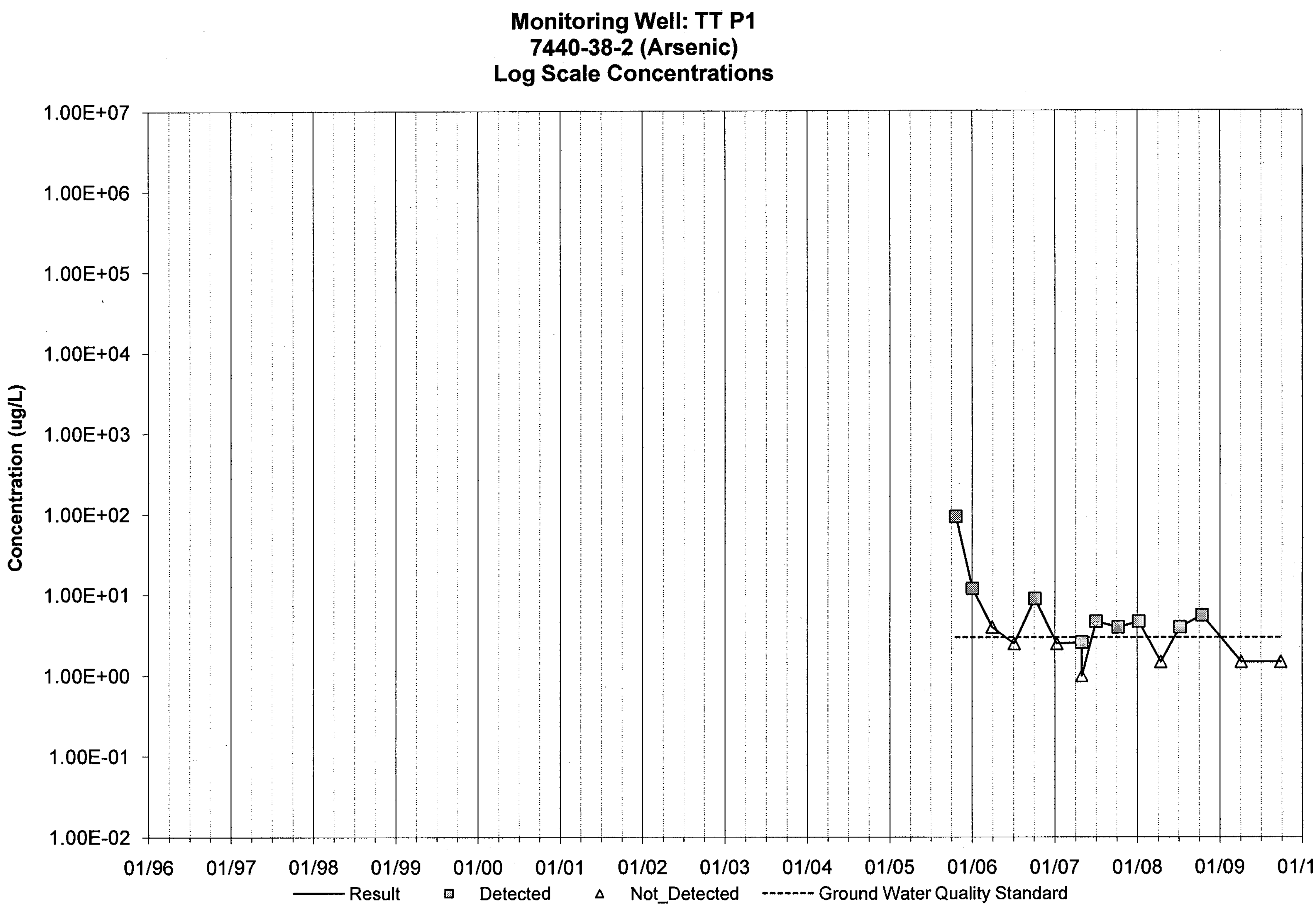


Monitoring Well: SS P3
7440-38-2 (Arsenic)
Log Scale Concentrations

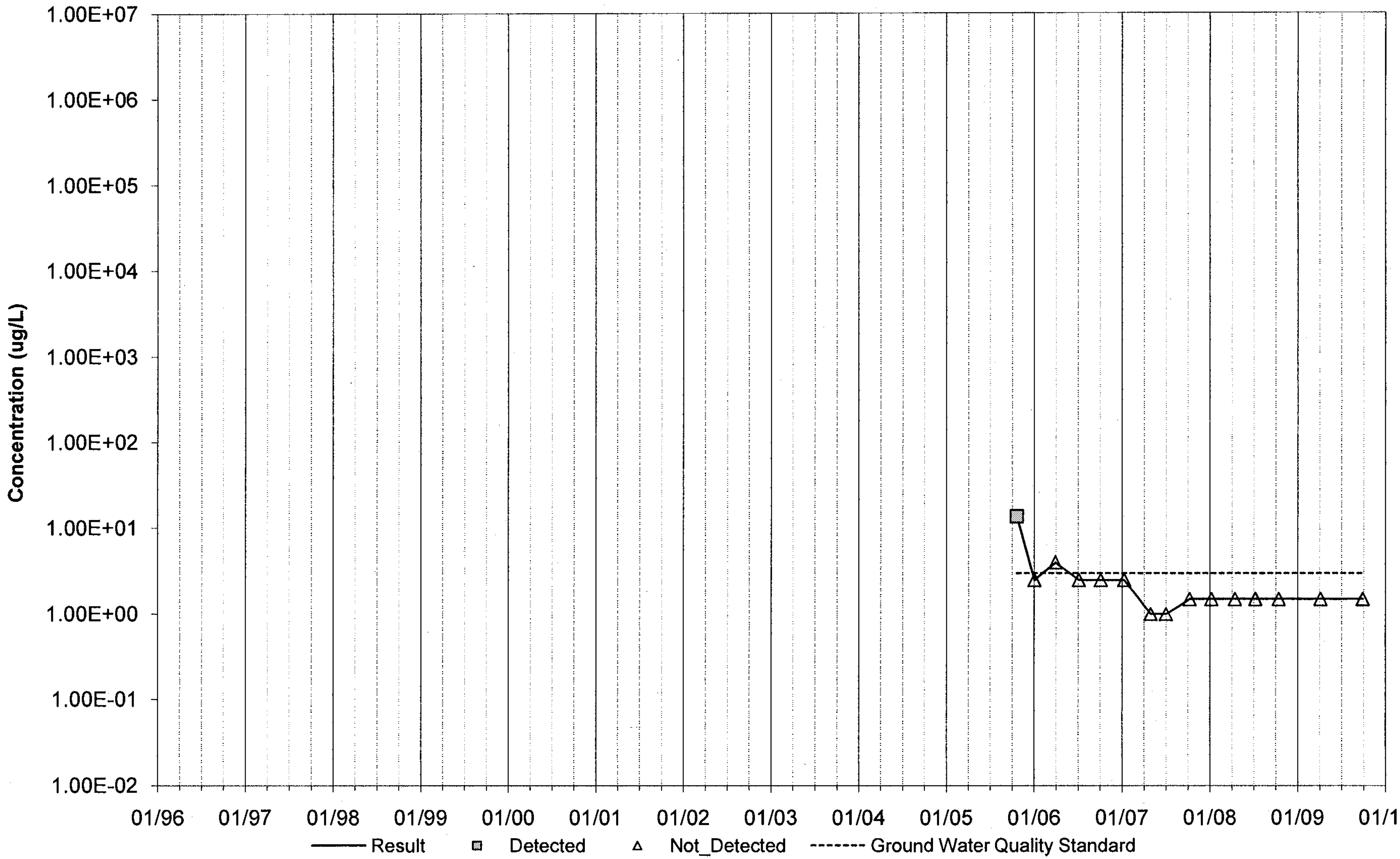


Monitoring Well: TFP-94-1R
7440-38-2 (Arsenic)
Log Scale Concentrations

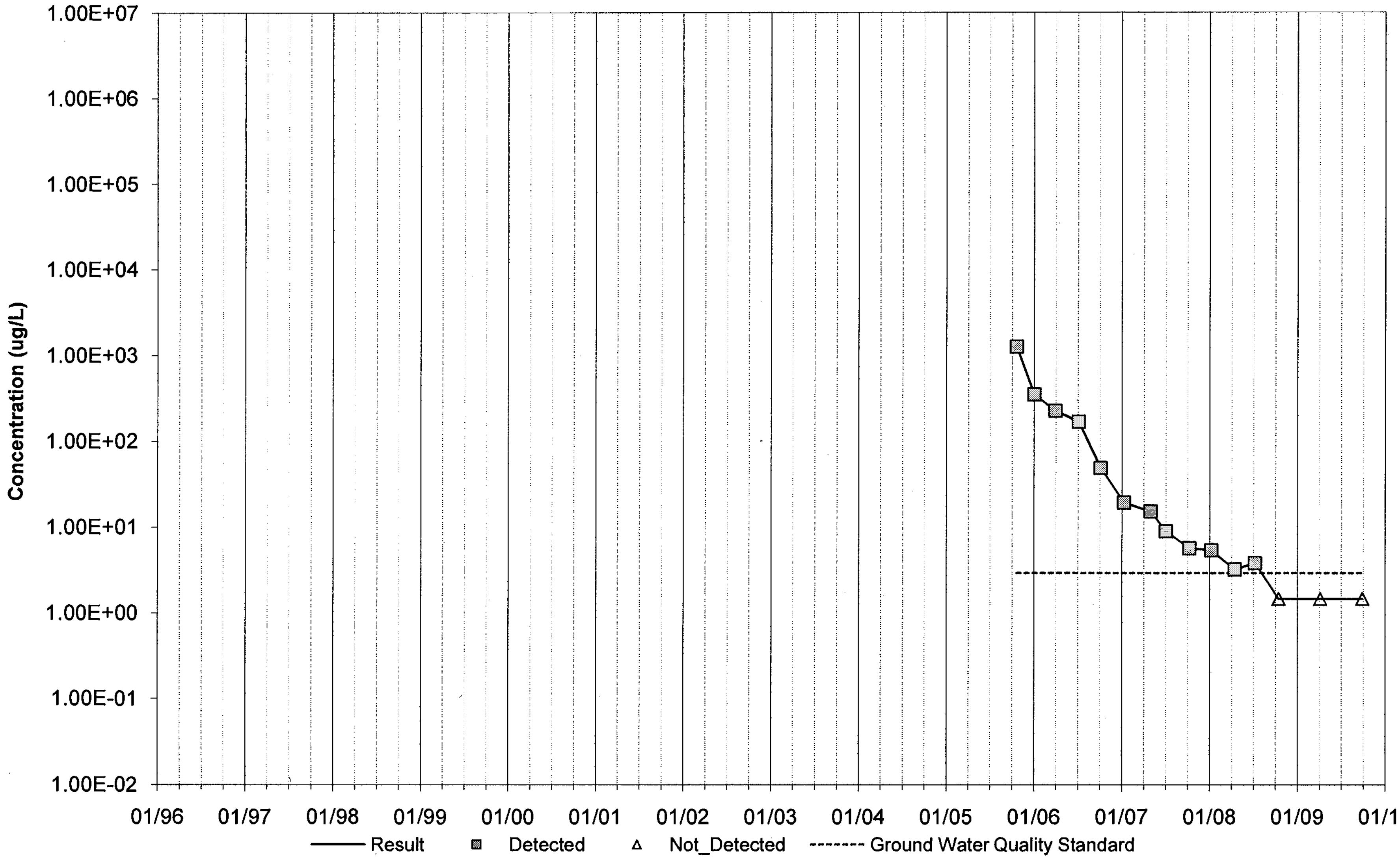



Monitoring Well: TT P1
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

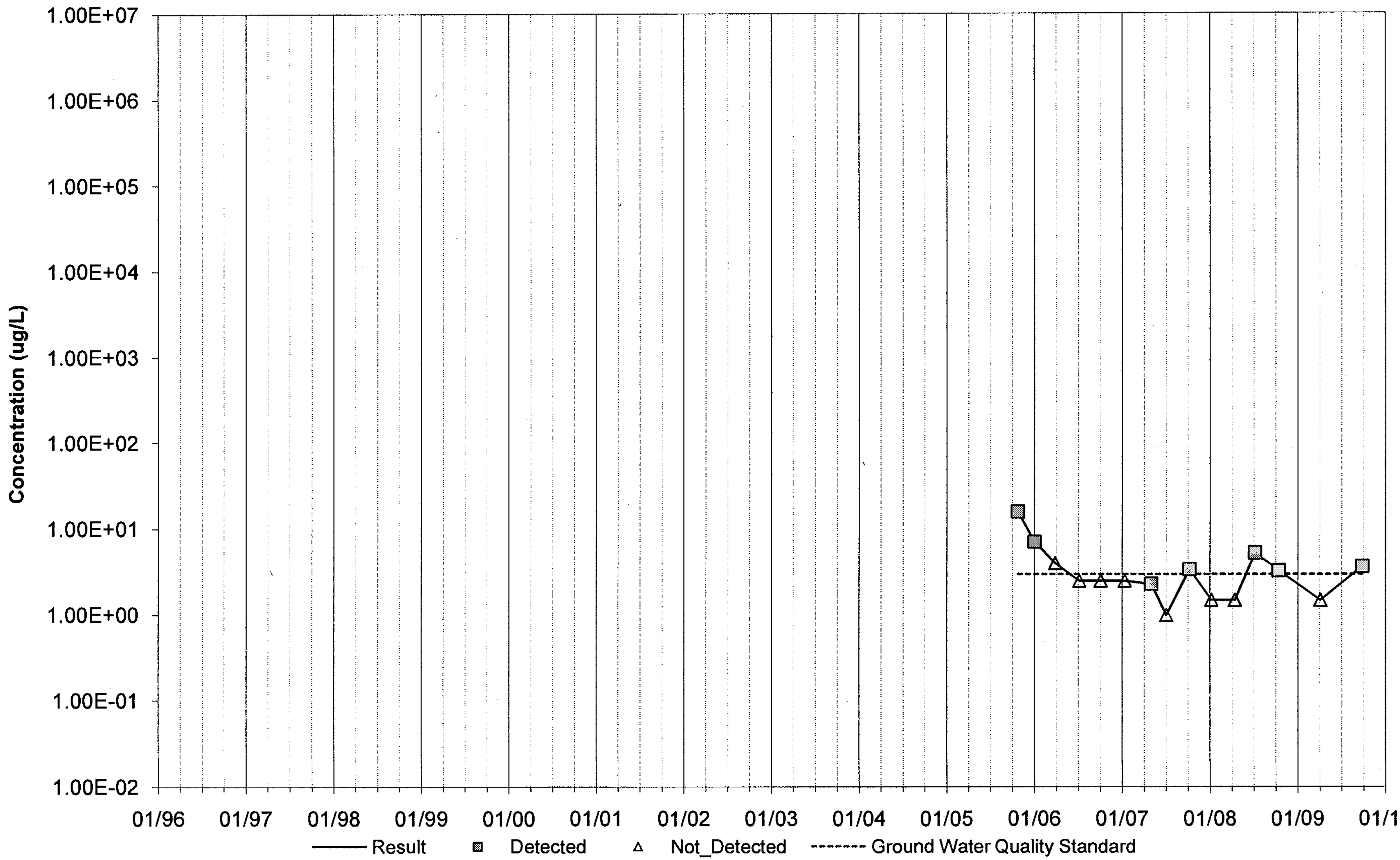
Monitoring Well: TT P2
7440-38-2 (Arsenic)
Log Scale Concentrations

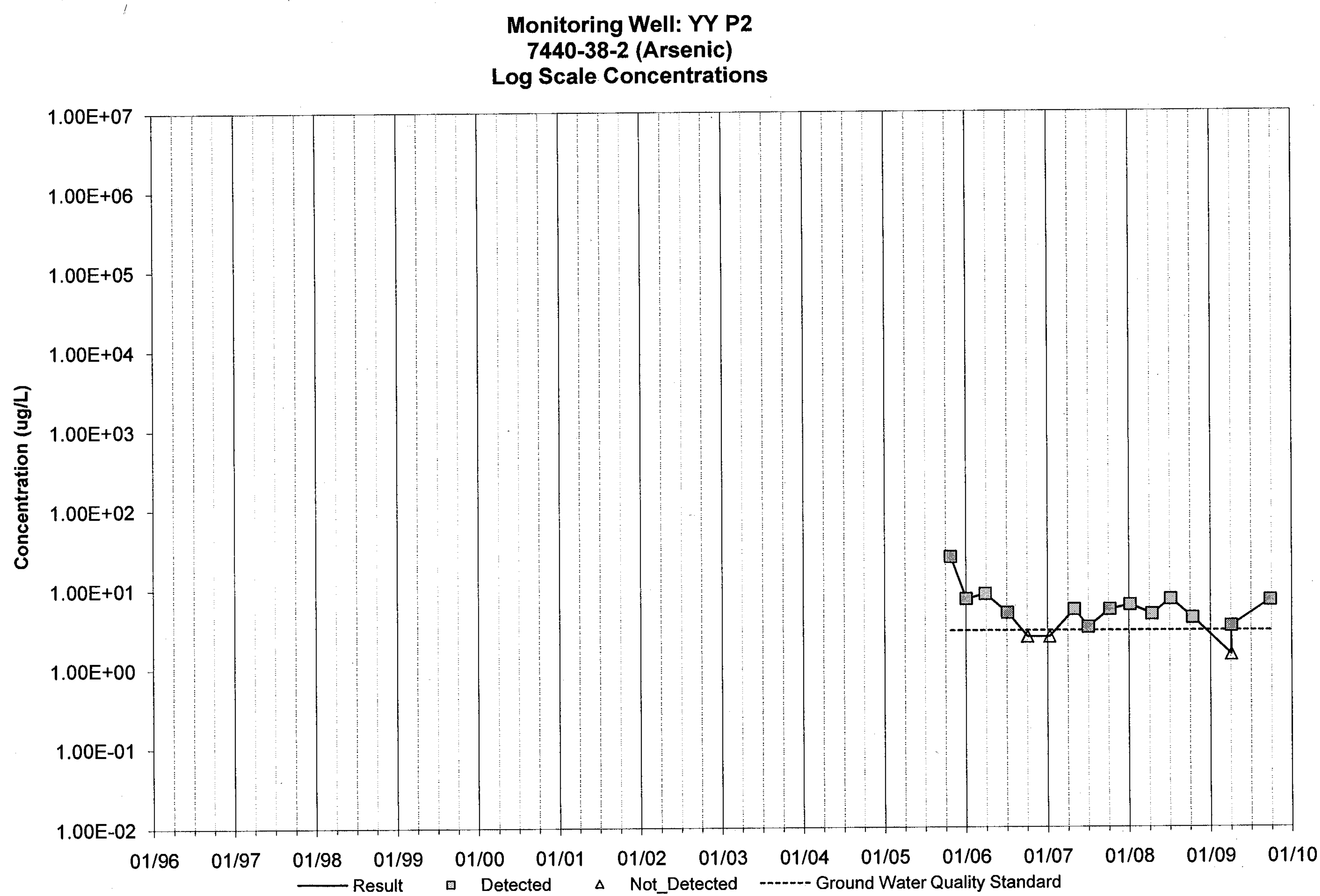


Monitoring Well: TT P3
7440-38-2 (Arsenic)
Log Scale Concentrations



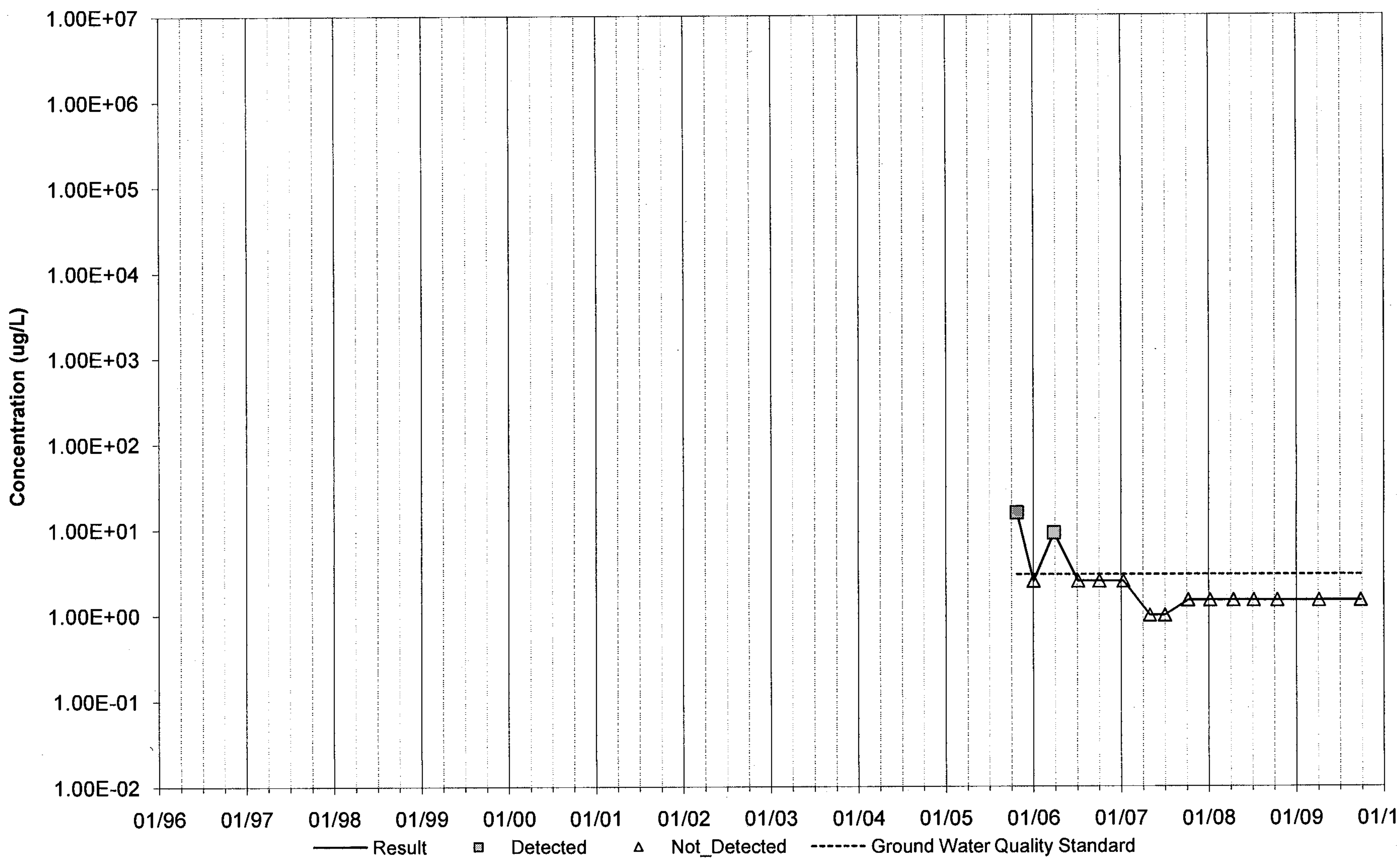
Monitoring Well: YY P1
7440-38-2 (Arsenic)
Log Scale Concentrations



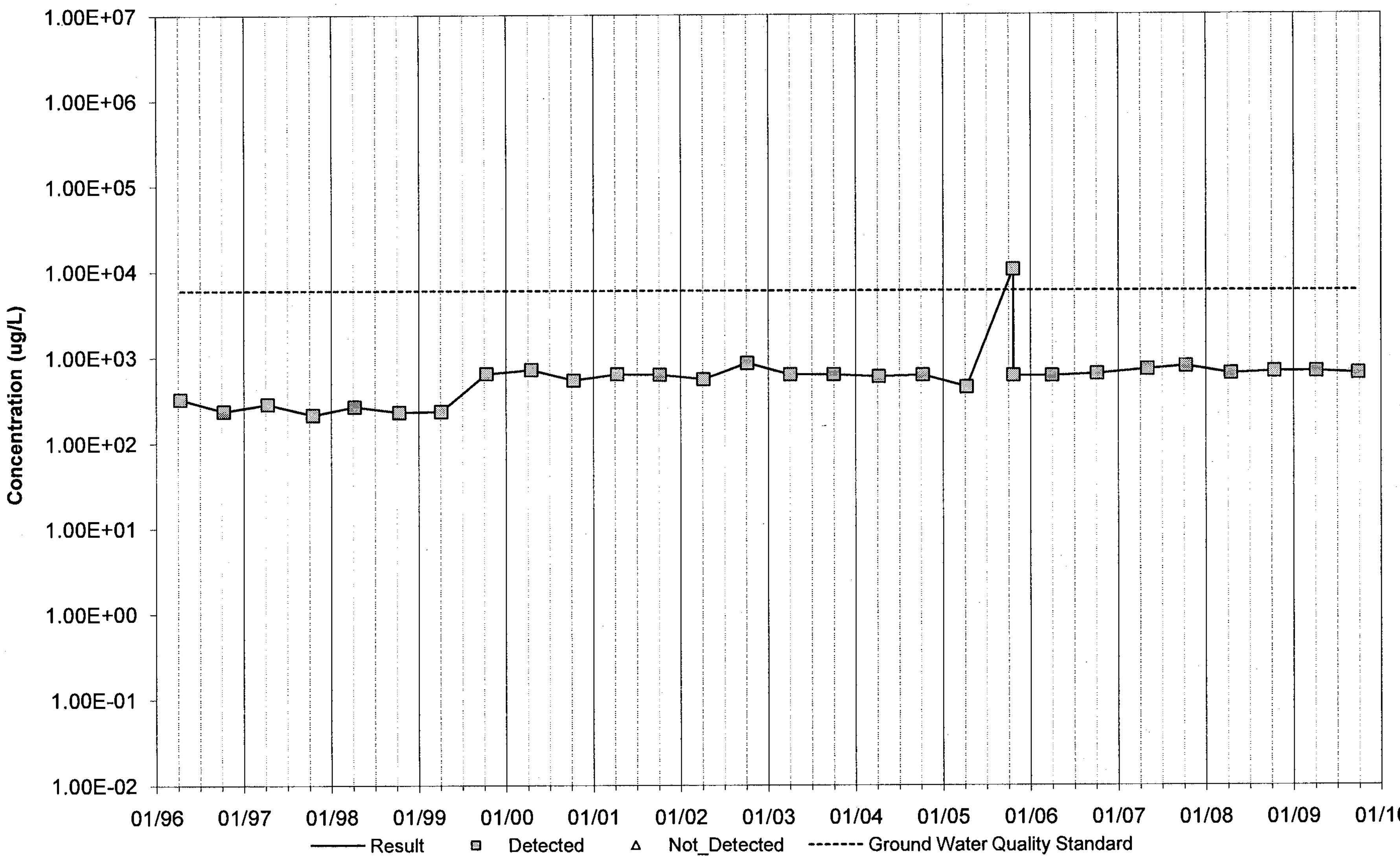


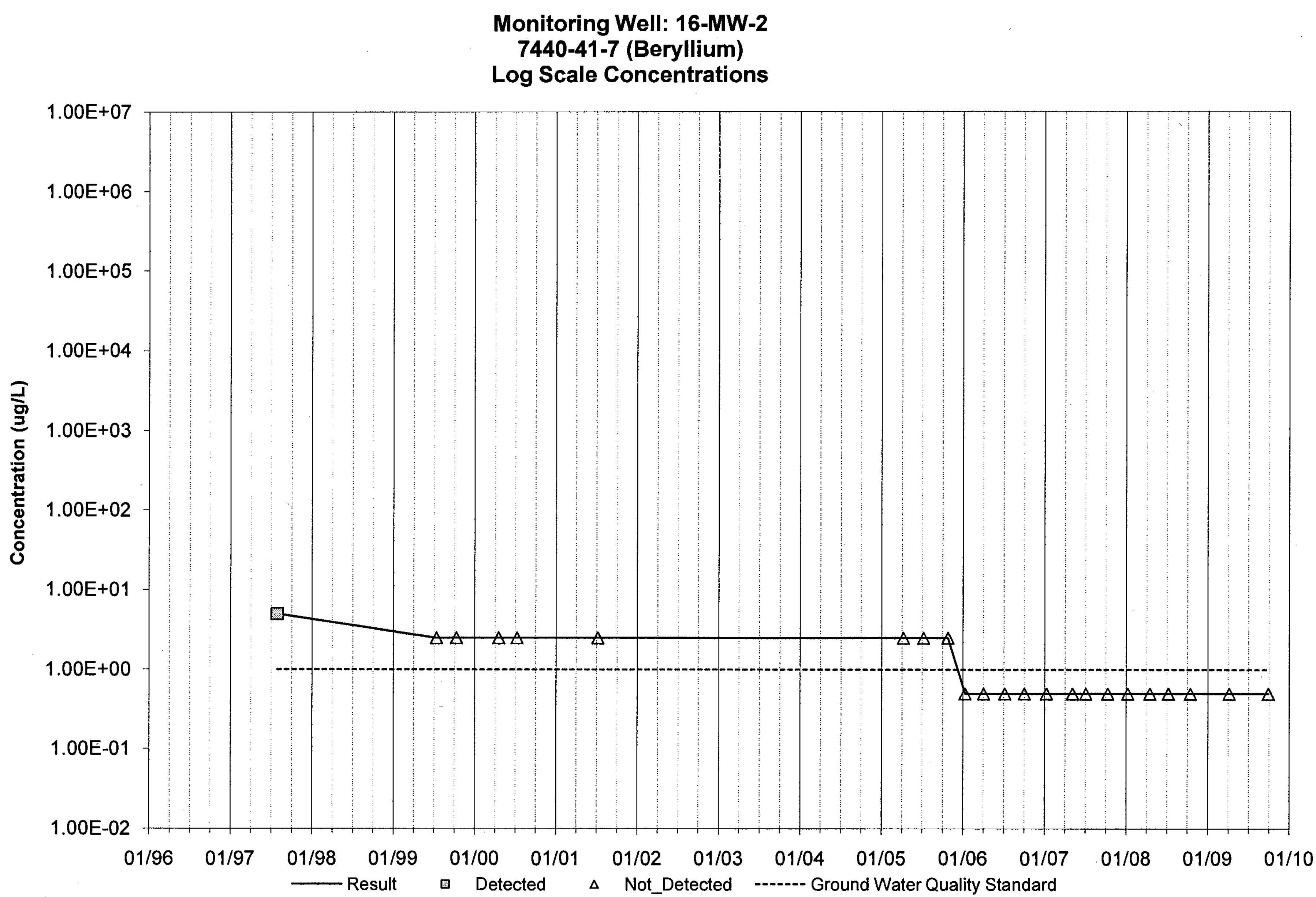
Monitoring Well: YY P2
7440-38-2 (Arsenic)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: YY P3
7440-38-2 (Arsenic)
Log Scale Concentrations

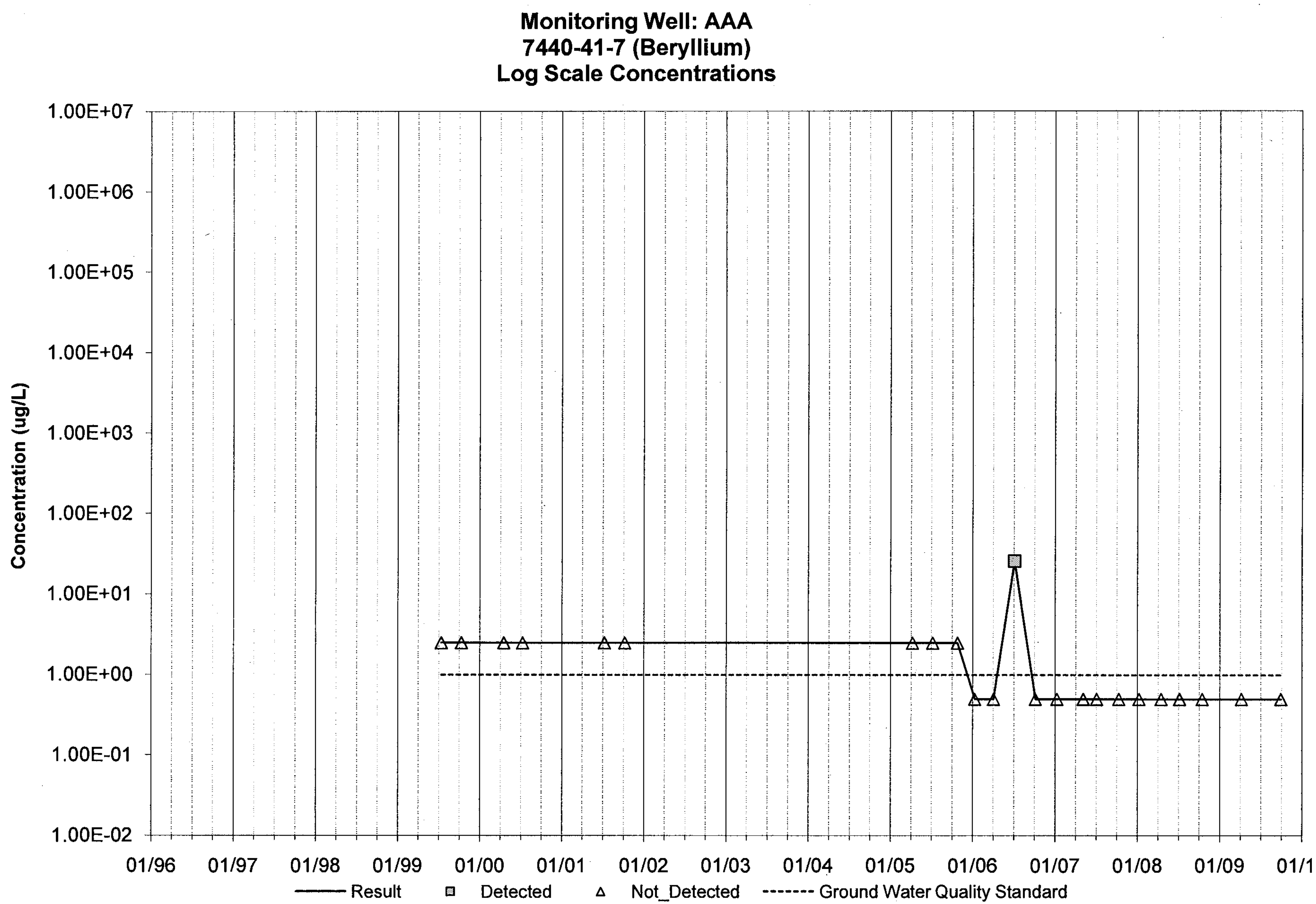


Monitoring Well: RCRA-D10
7440-39-3 (Barium)
Log Scale Concentrations

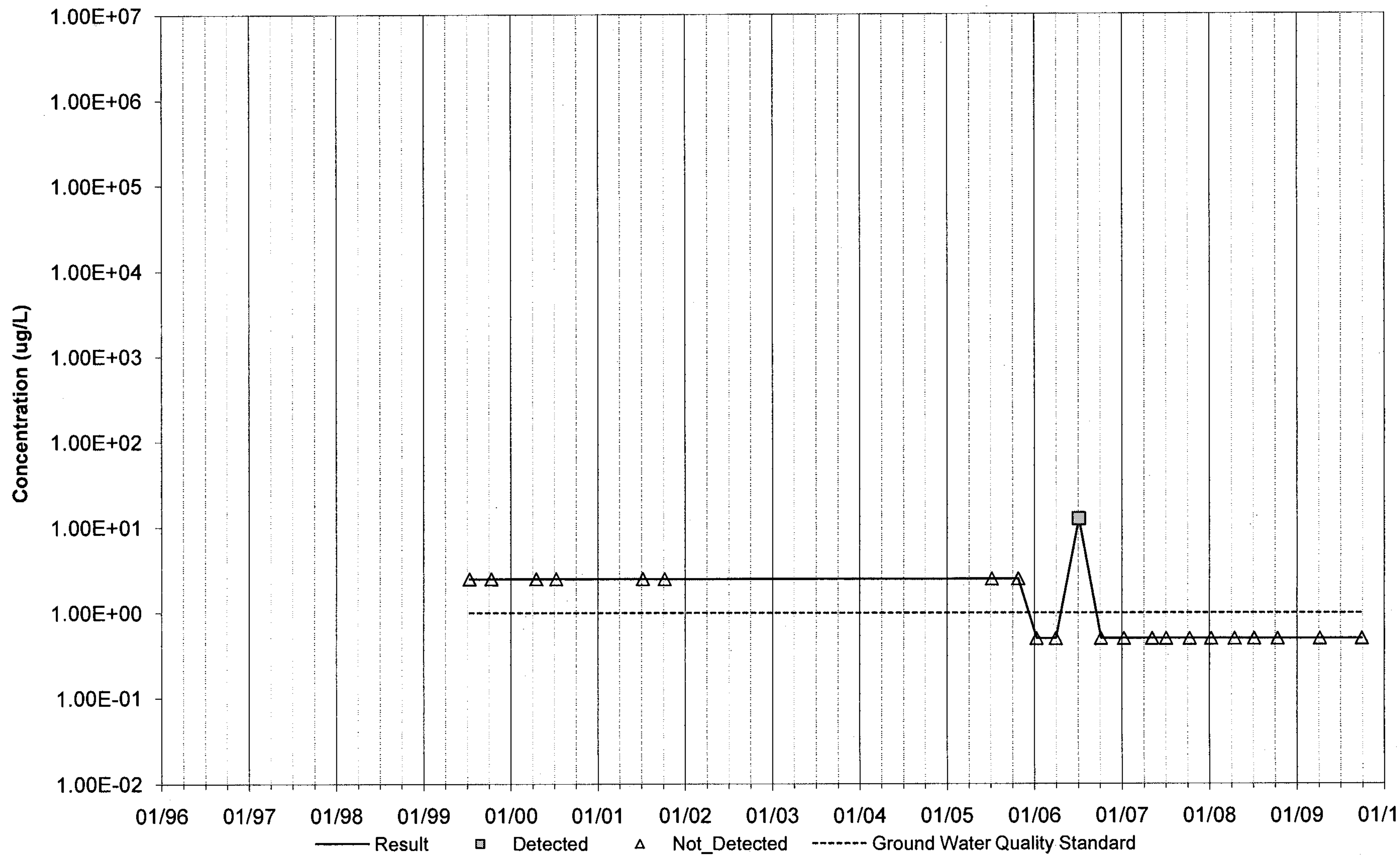




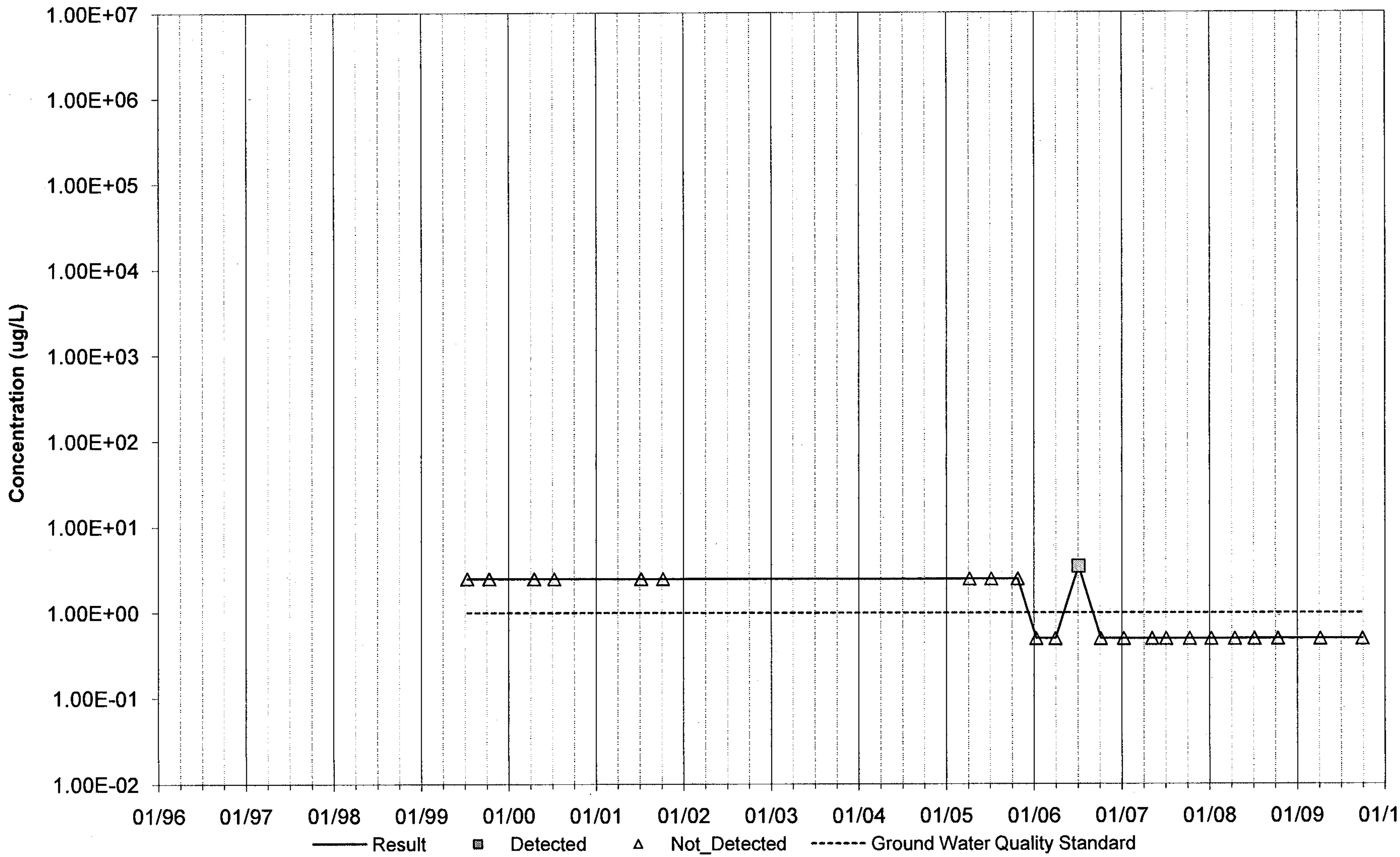
Monitoring Well: 16-MW-2
7440-41-7 (Beryllium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: AAA
7440-41-7 (Beryllium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

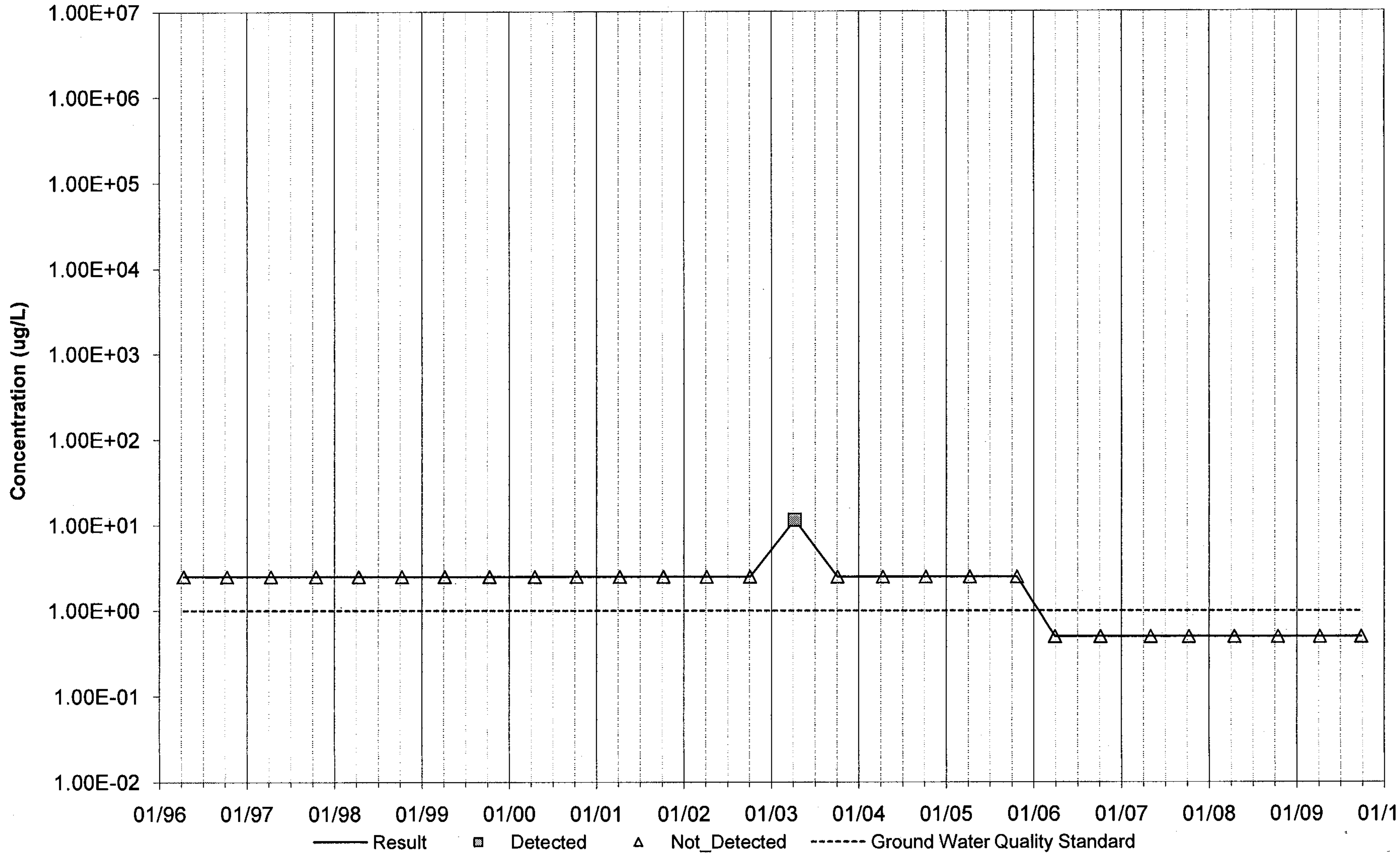
Monitoring Well: CCC-R
7440-41-7 (Beryllium)
Log Scale Concentrations



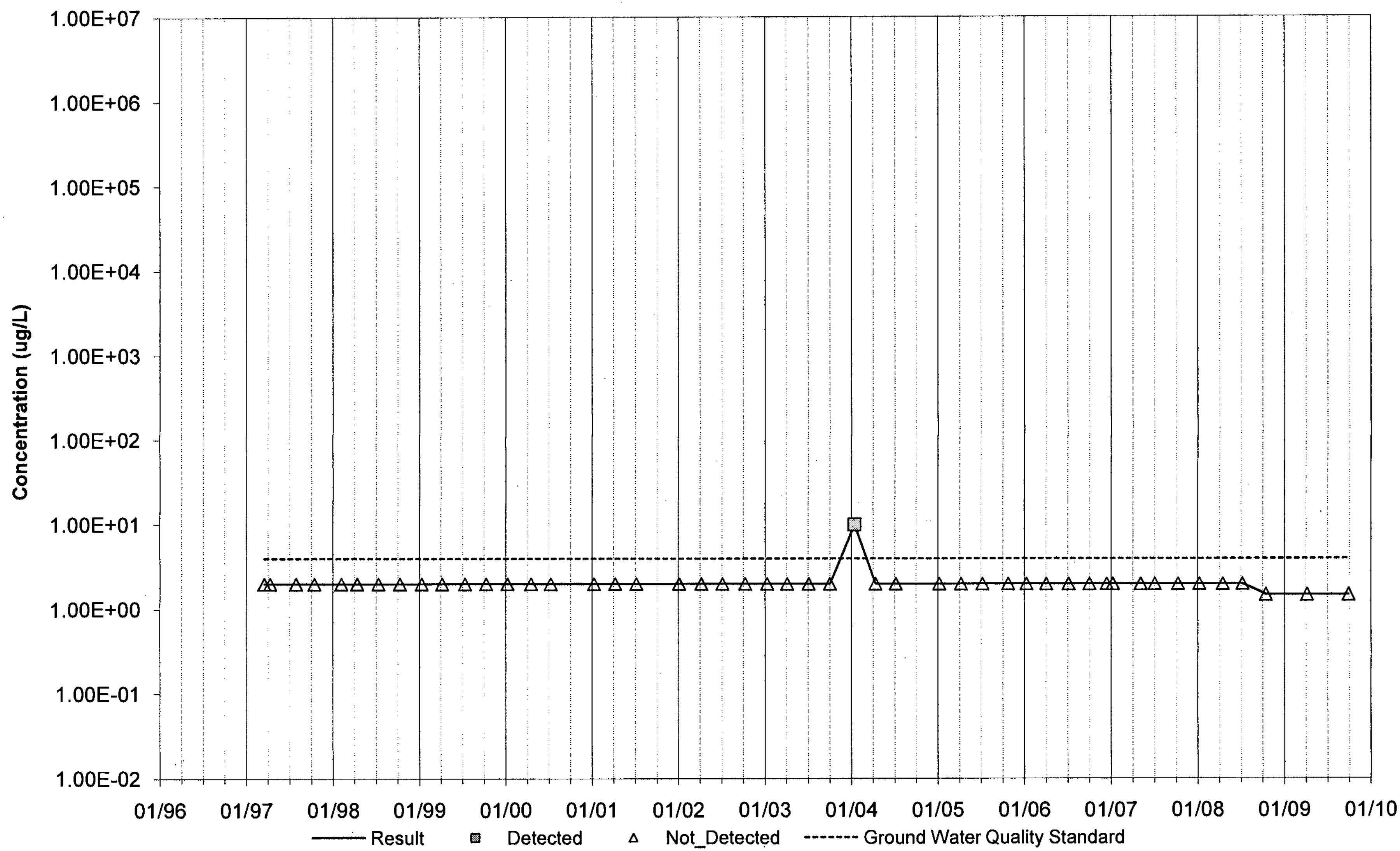
Monitoring Well: EEE-R
7440-41-7 (Beryllium)
Log Scale Concentrations



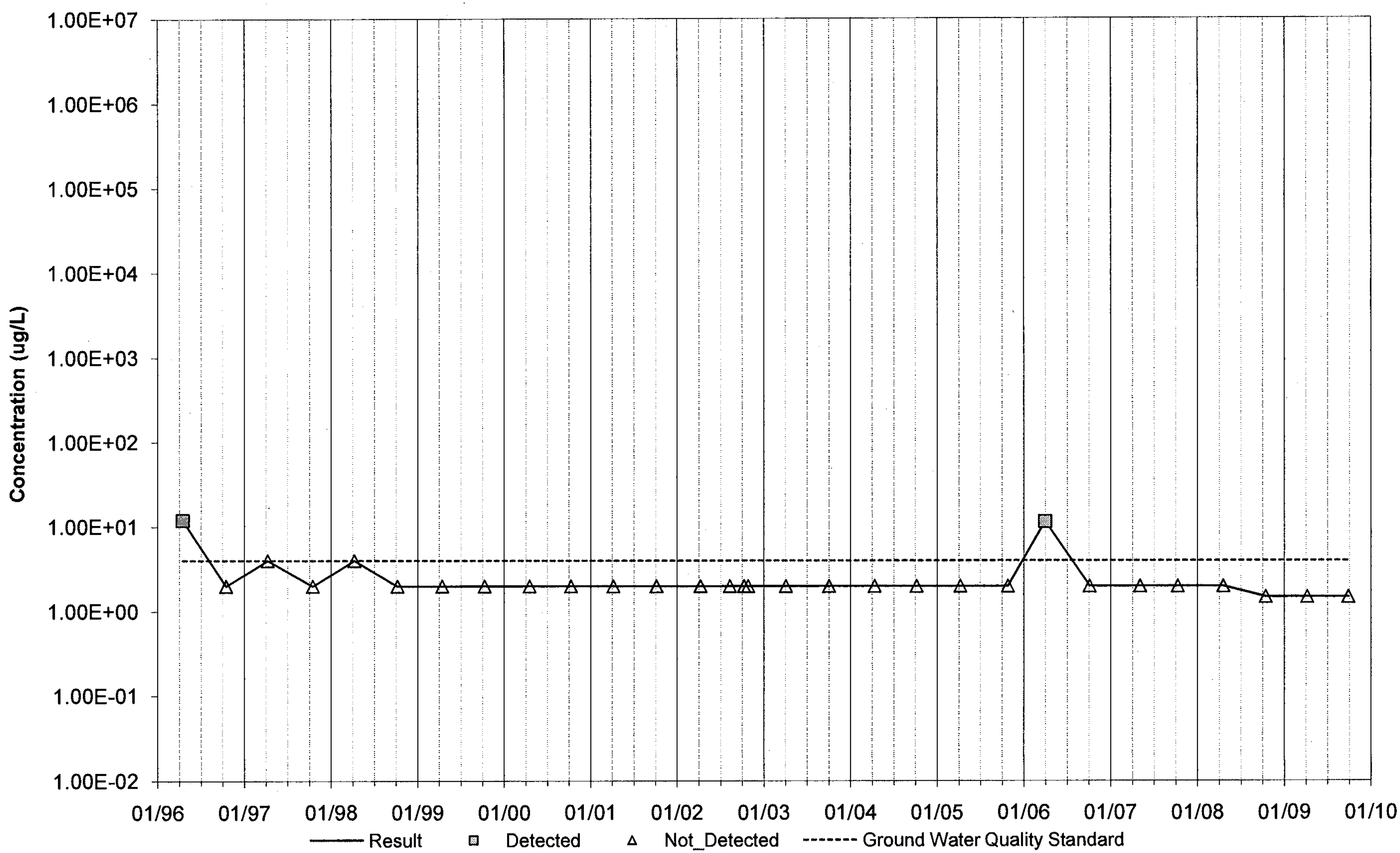
Monitoring Well: RCRA-D12
7440-41-7 (Beryllium)
Log Scale Concentrations



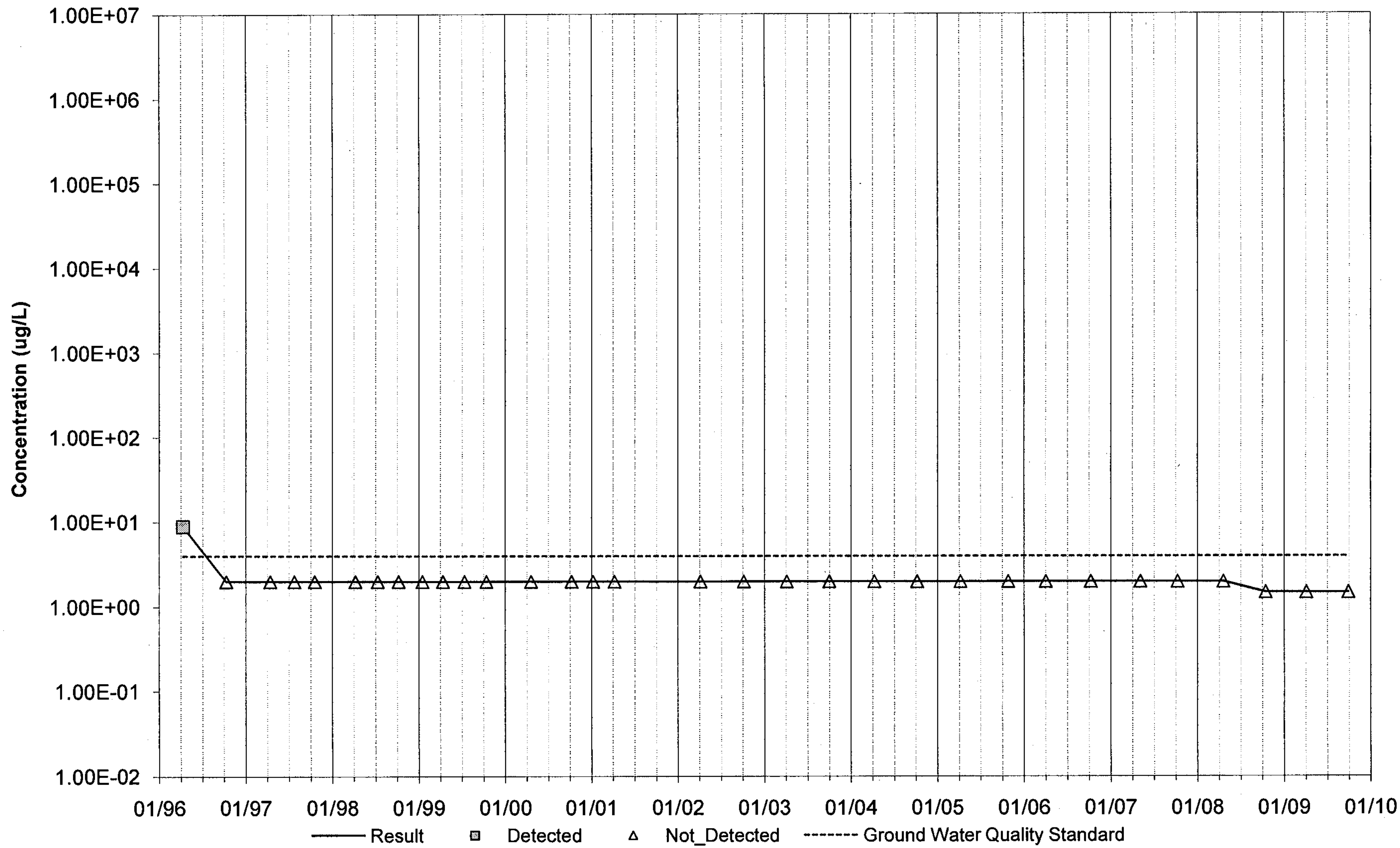
Monitoring Well: 16-MW-2
7440-43-9 (Cadmium)
Log Scale Concentrations

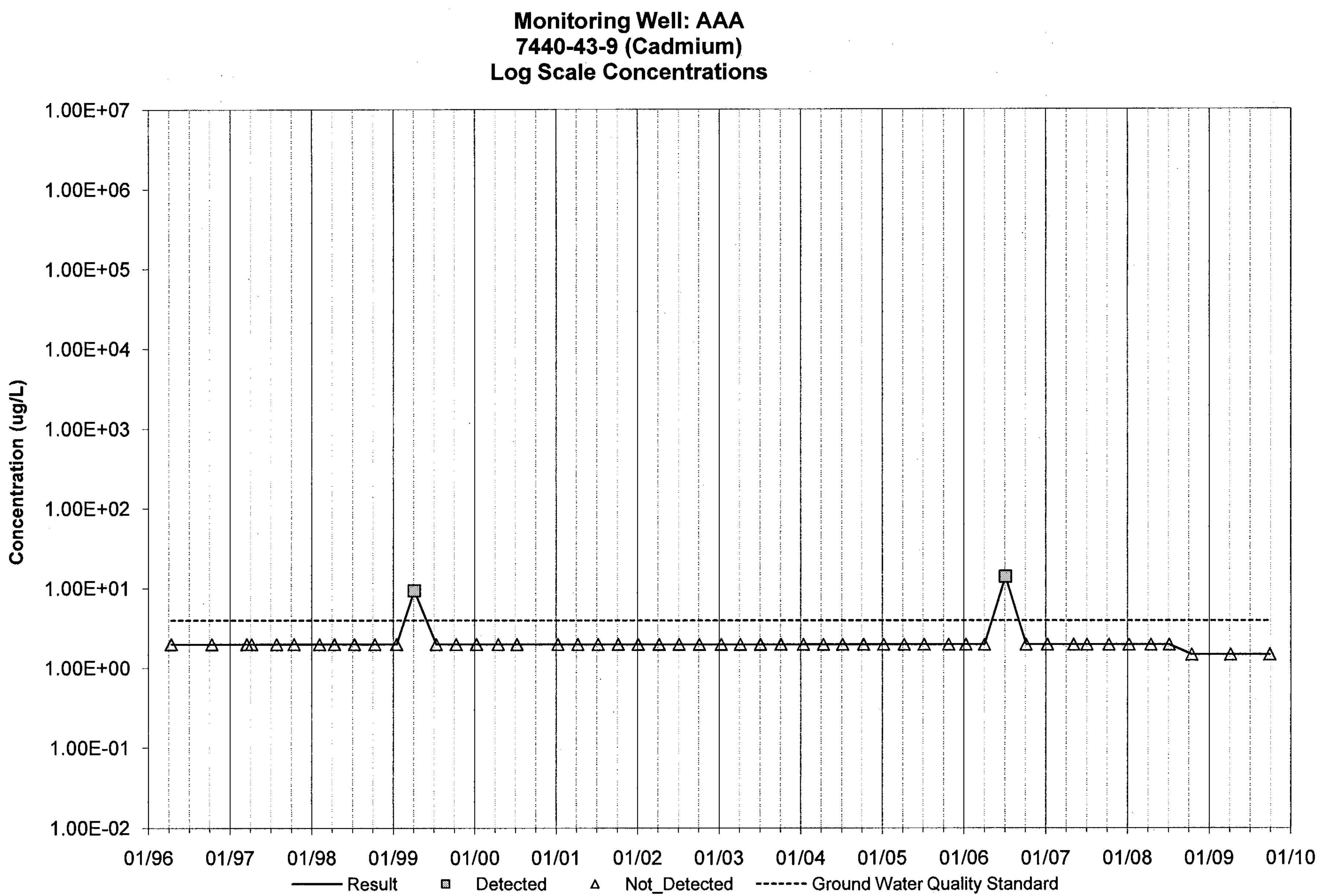


Monitoring Well: 28R
7440-43-9 (Cadmium)
Log Scale Concentrations

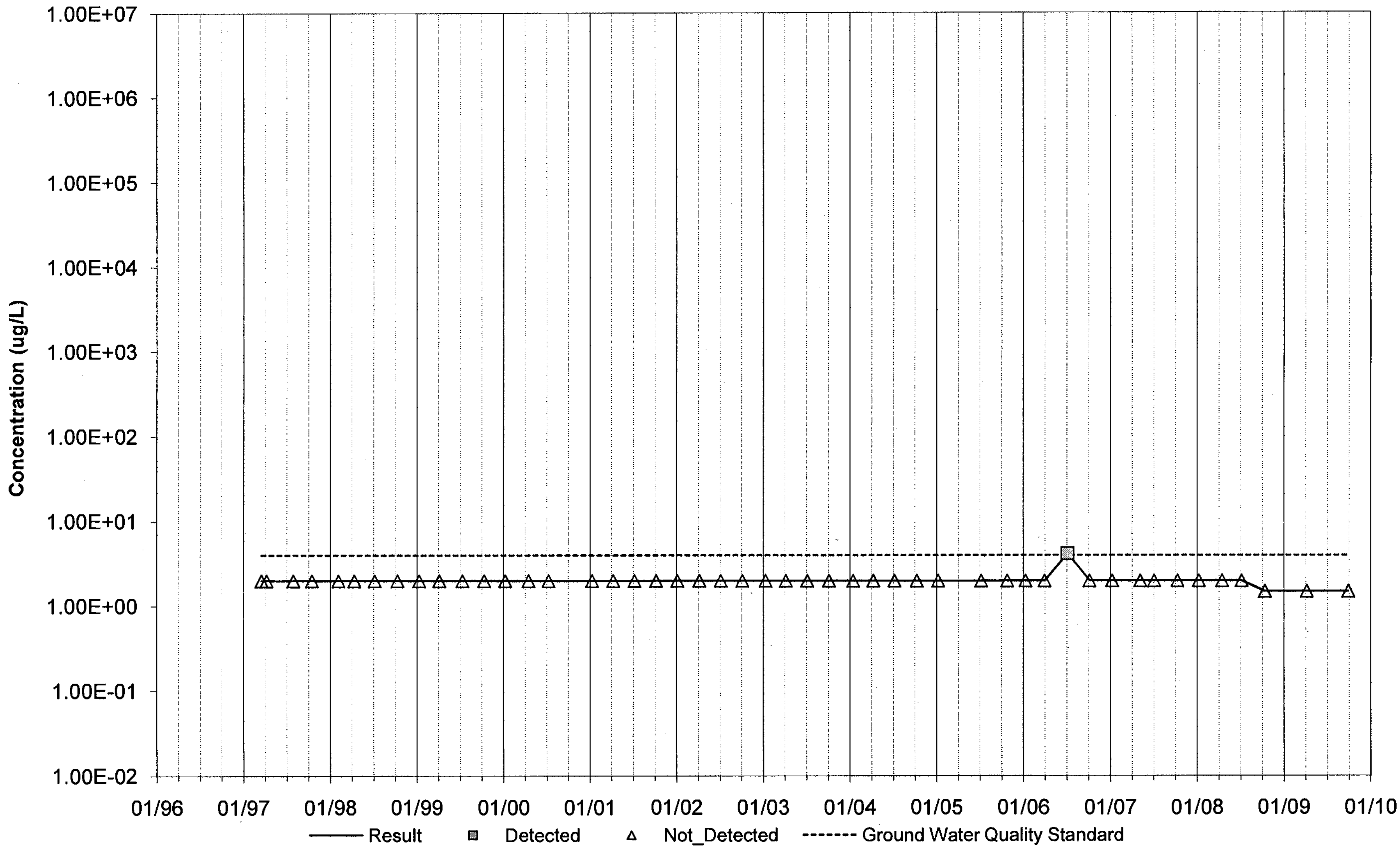


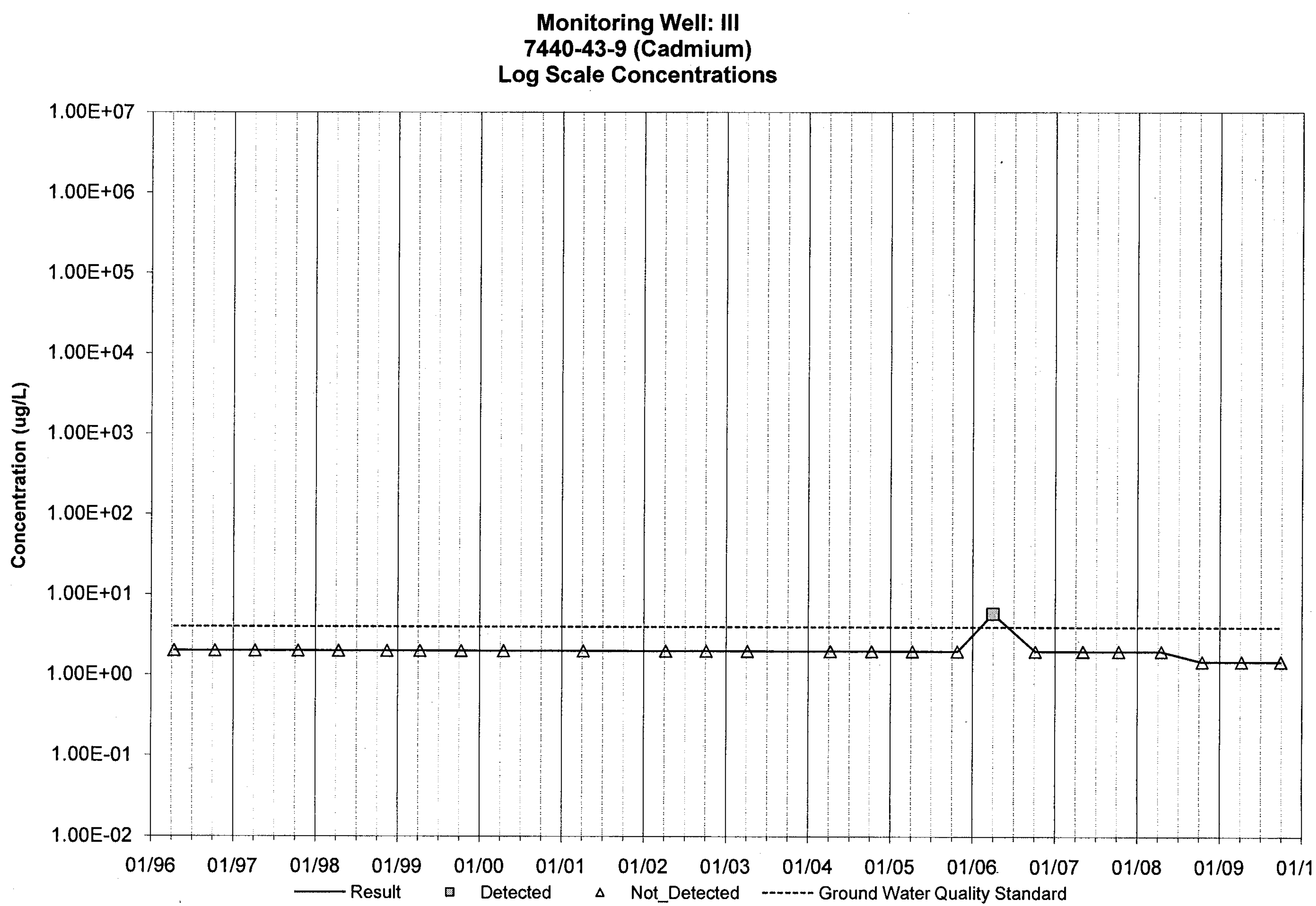
Monitoring Well: 38R
7440-43-9 (Cadmium)
Log Scale Concentrations

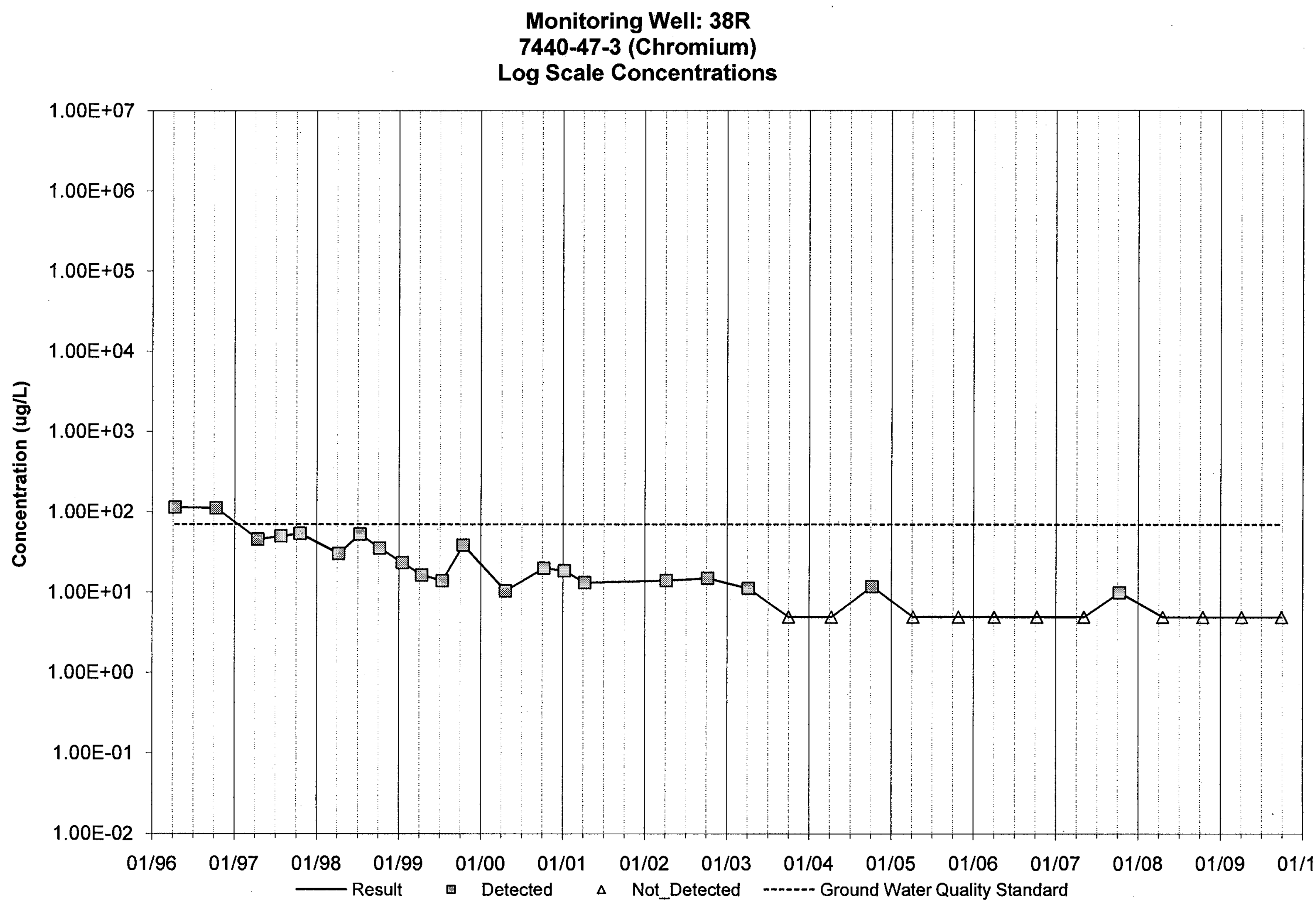



Monitoring Well: AAA
7440-43-9 (Cadmium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

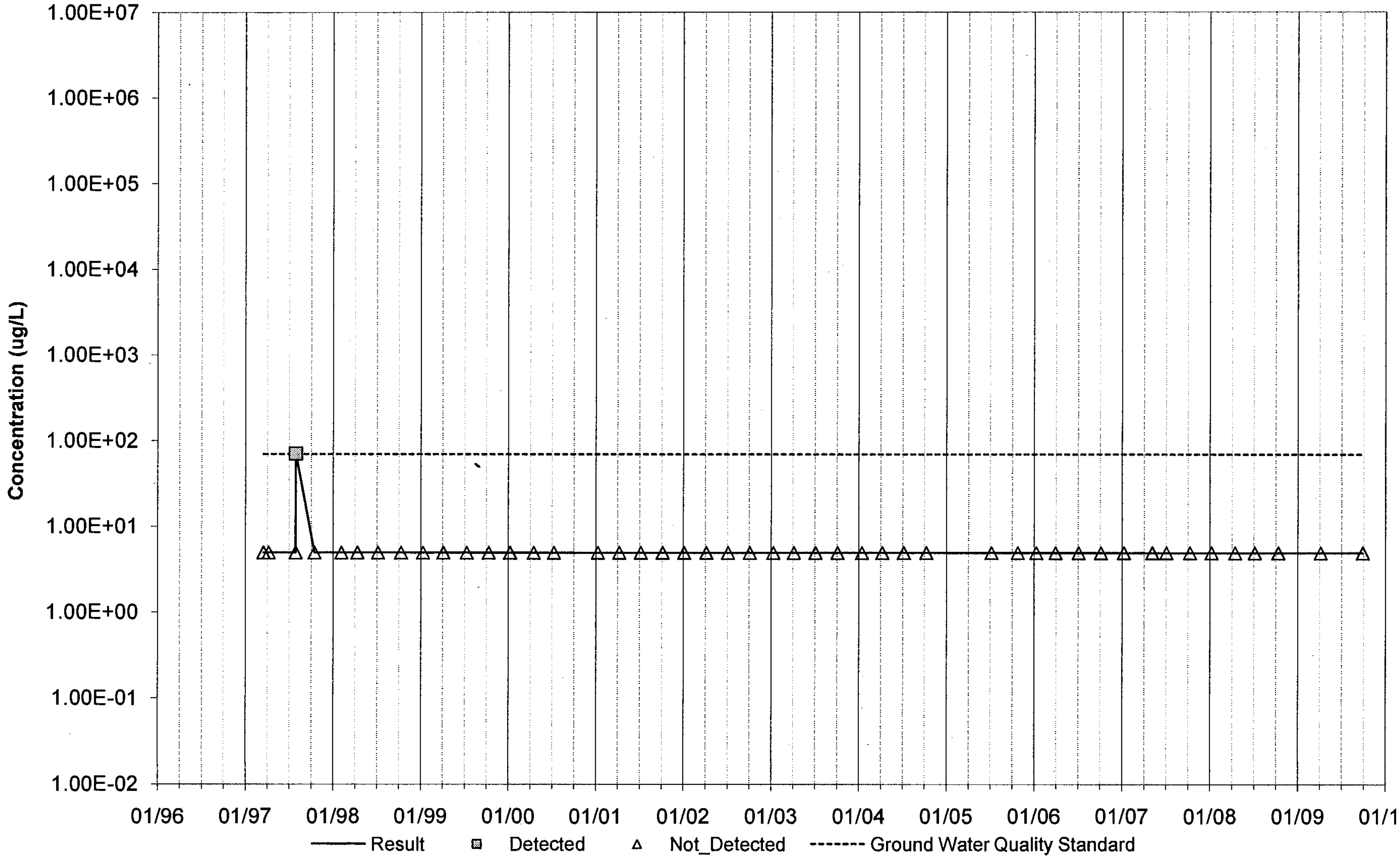
Monitoring Well: CCC-R
7440-43-9 (Cadmium)
Log Scale Concentrations



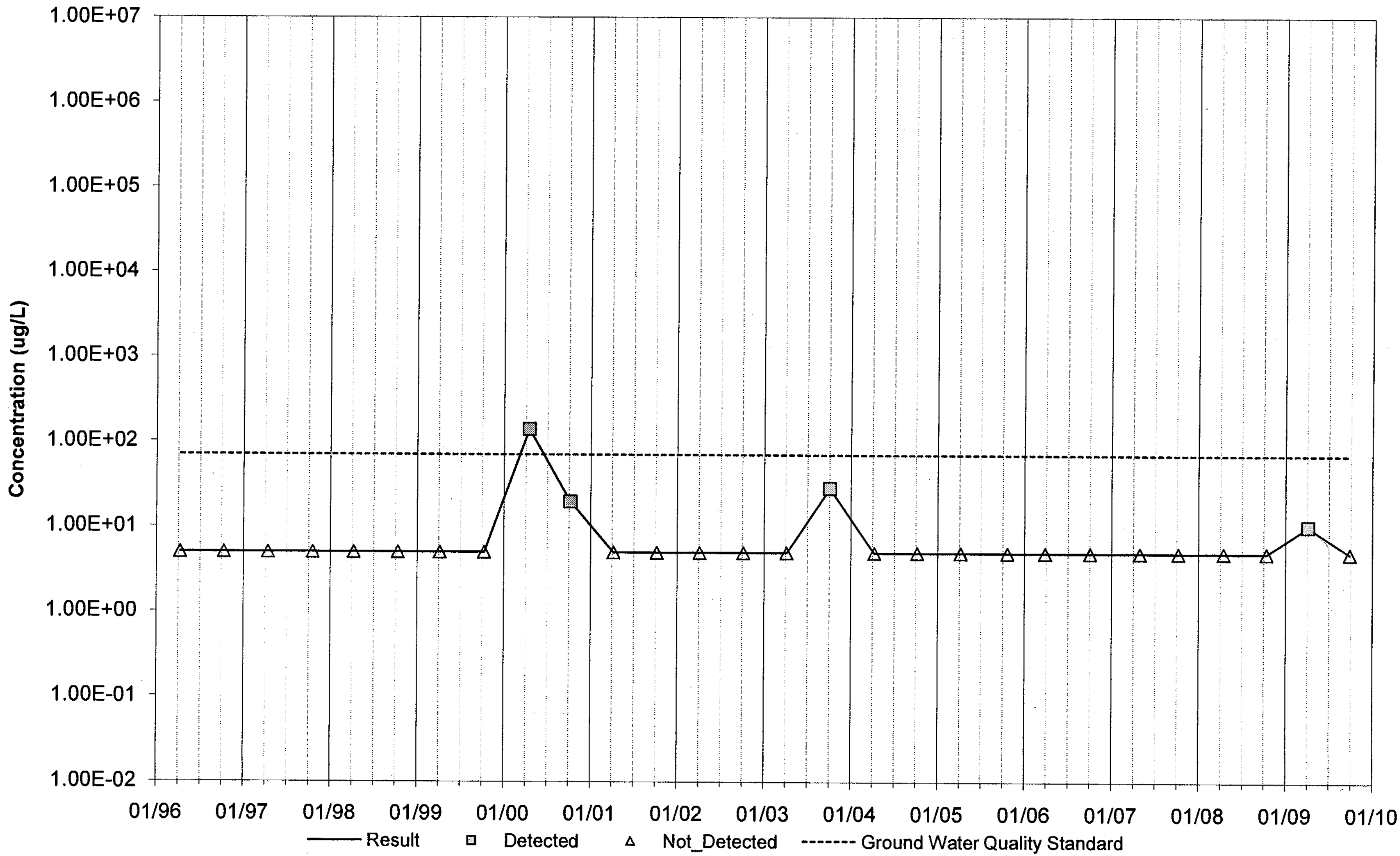

Monitoring Well: III
7440-43-9 (Cadmium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: 38R
7440-47-3 (Chromium)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

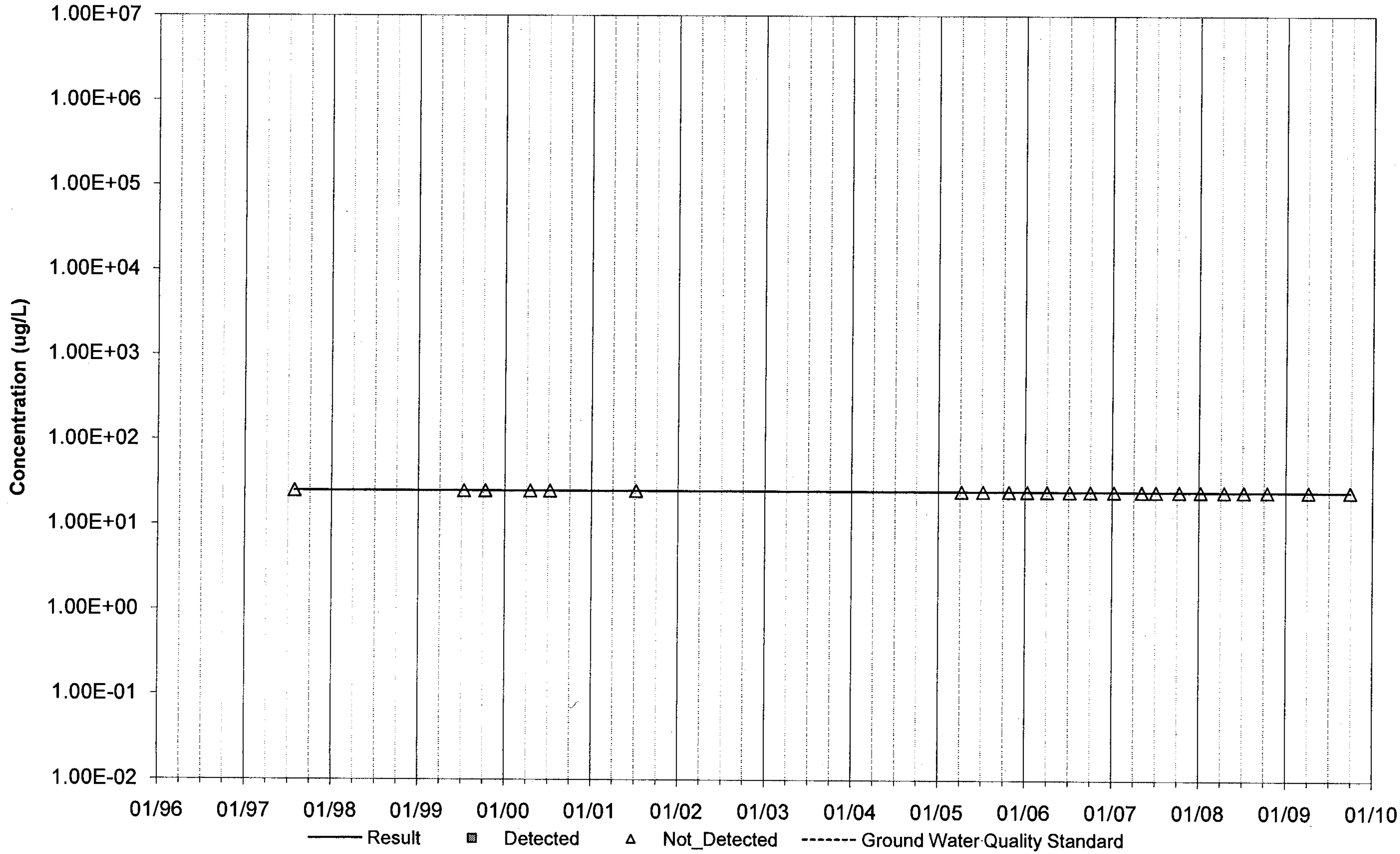
Monitoring Well: CCC-R
7440-47-3 (Chromium)
Log Scale Concentrations



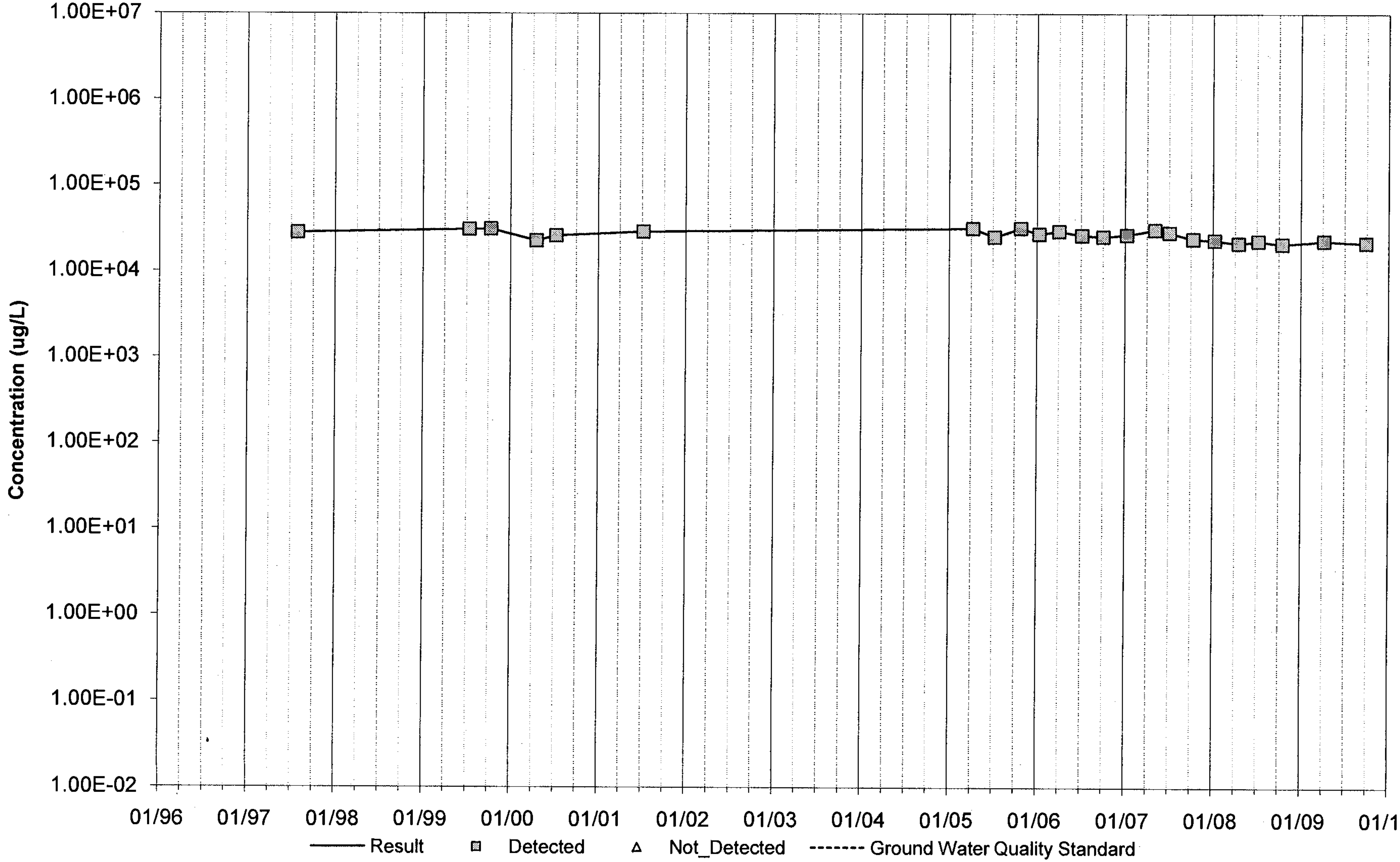
Monitoring Well: RCRA-D6
7440-47-3 (Chromium)
Log Scale Concentrations



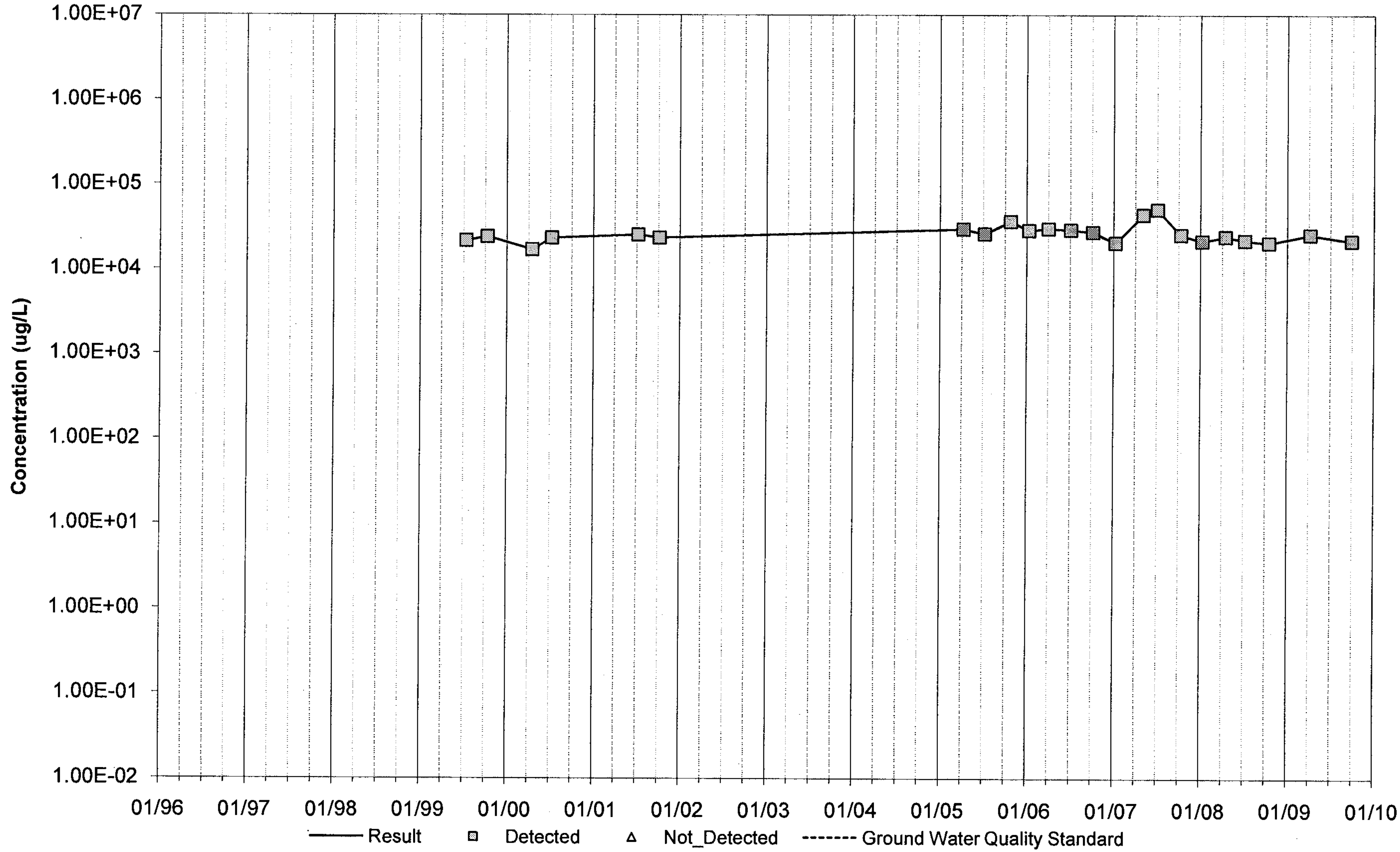
Monitoring Well: 16-MW-2
7440-48-4 (Cobalt)
Log Scale Concentrations

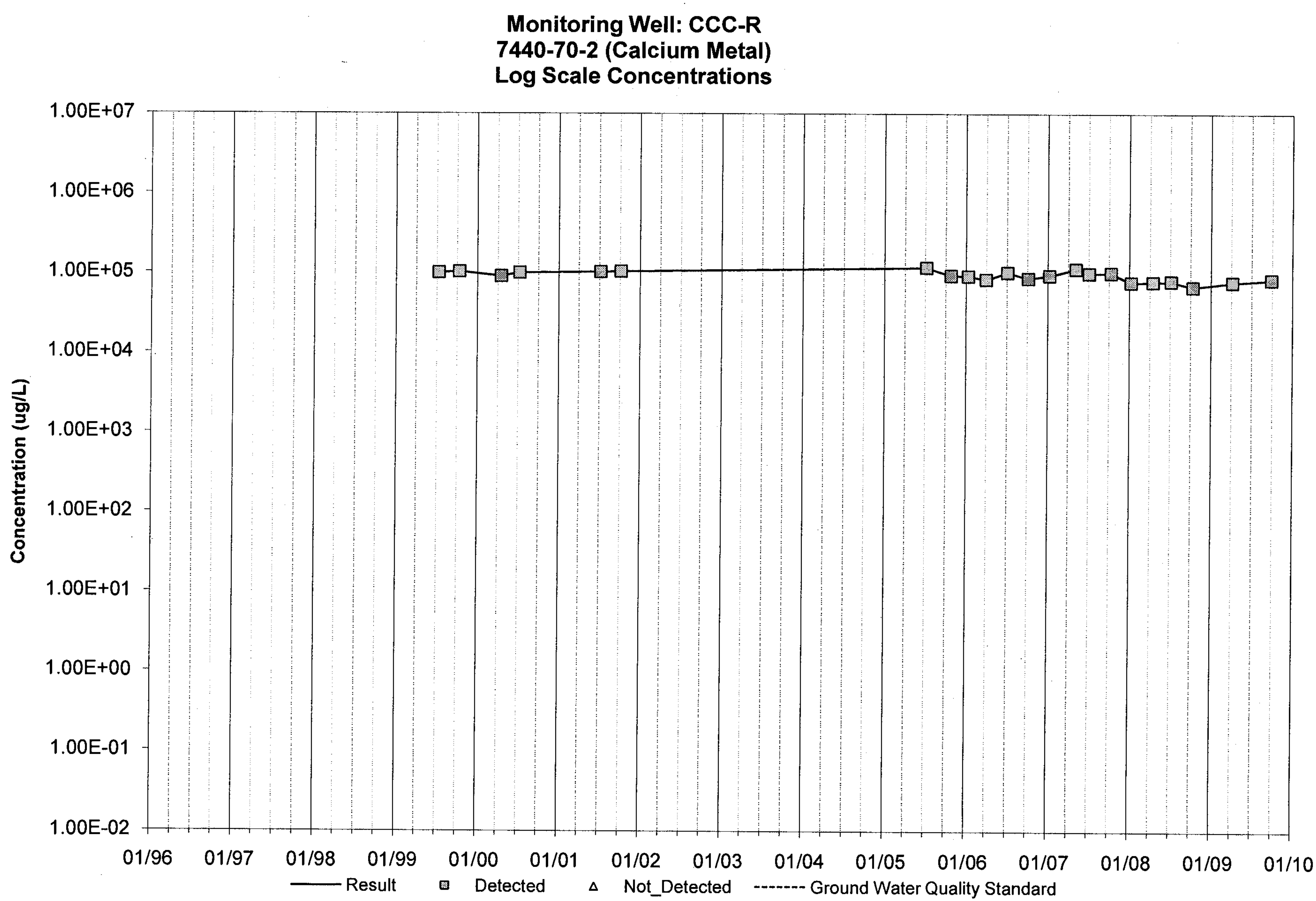


Monitoring Well: 16-MW-2
7440-70-2 (Calcium Metal)
Log Scale Concentrations

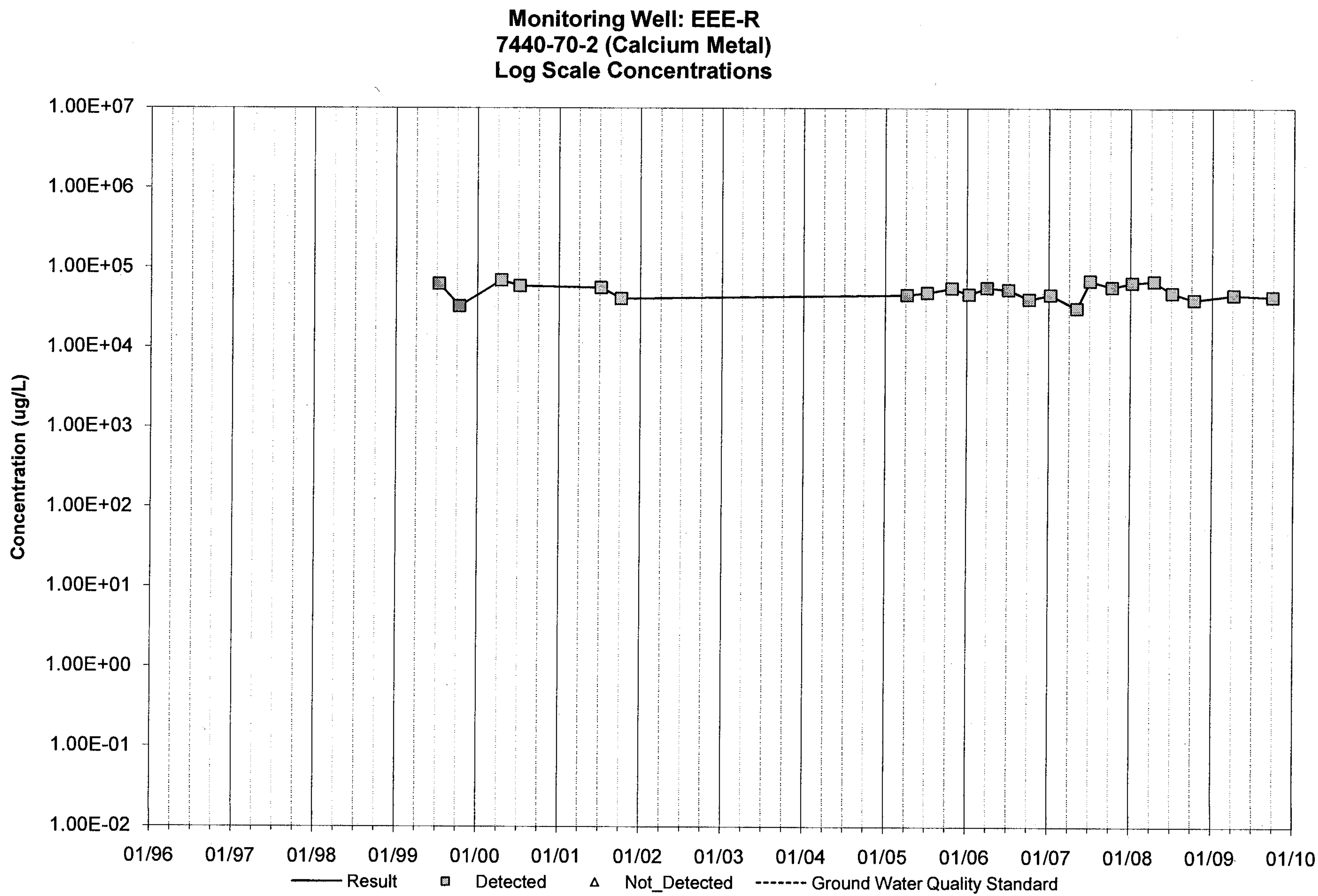


Monitoring Well: AAA
7440-70-2 (Calcium Metal)
Log Scale Concentrations

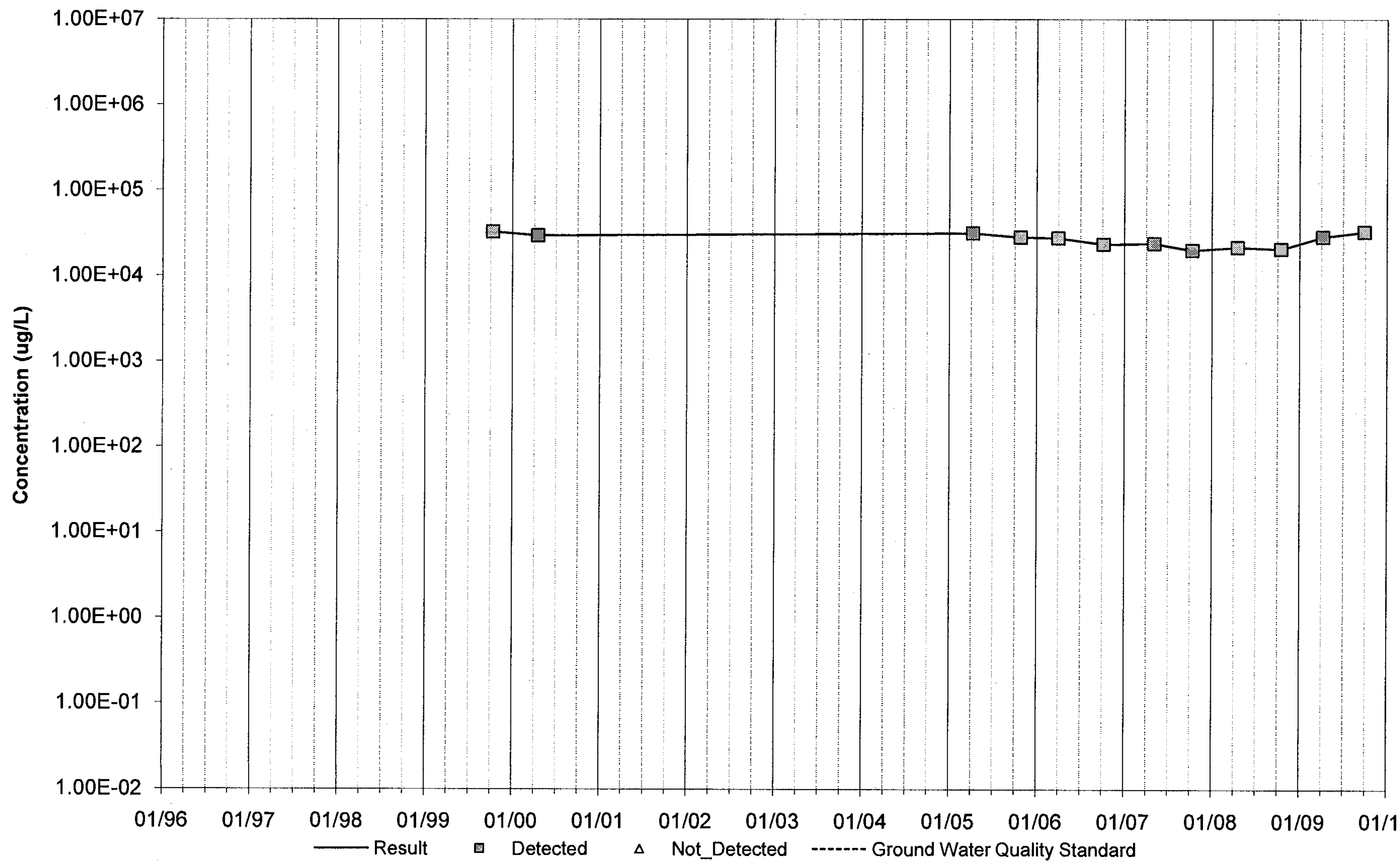


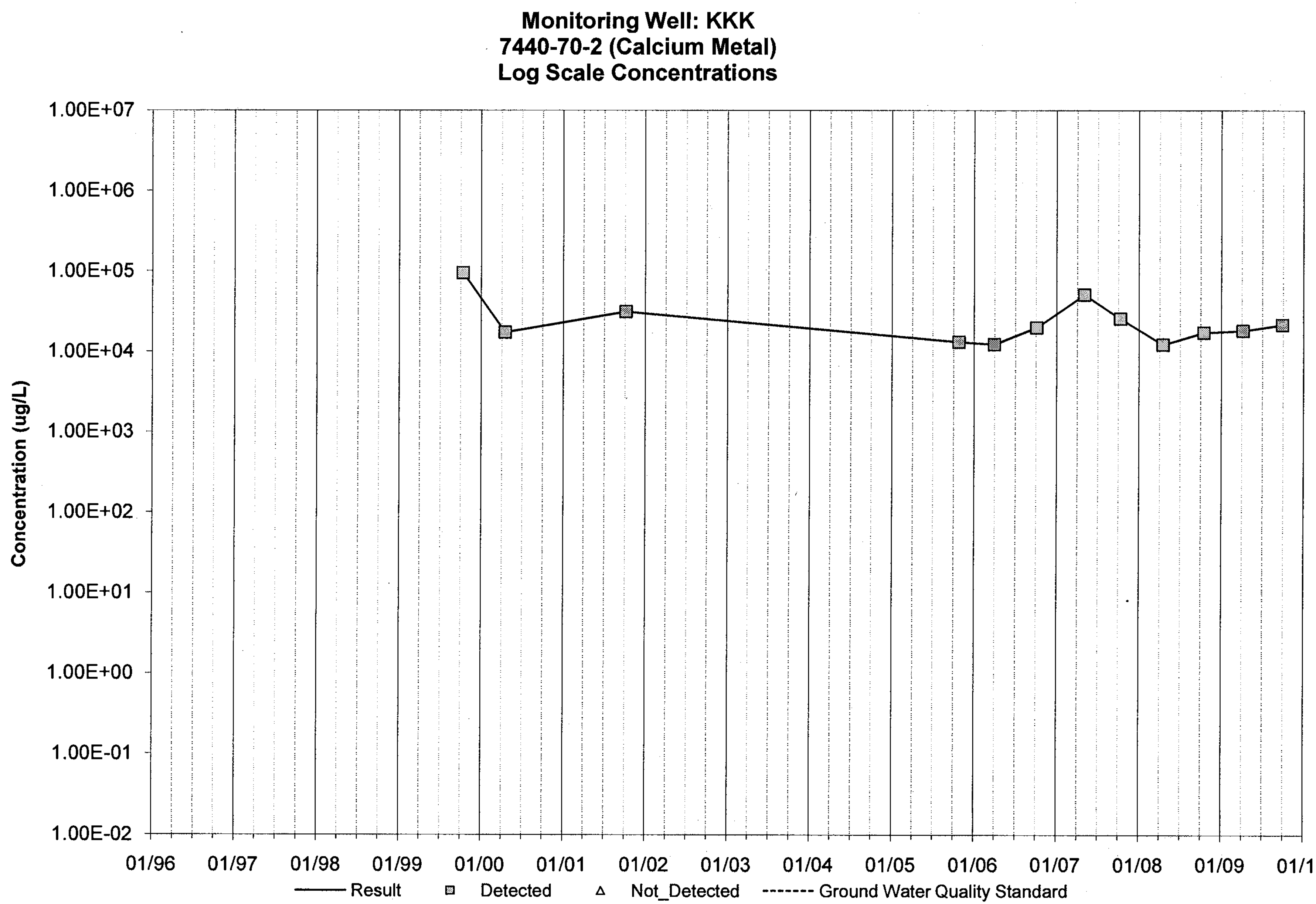


Monitoring Well: CCC-R
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: EEE-R
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

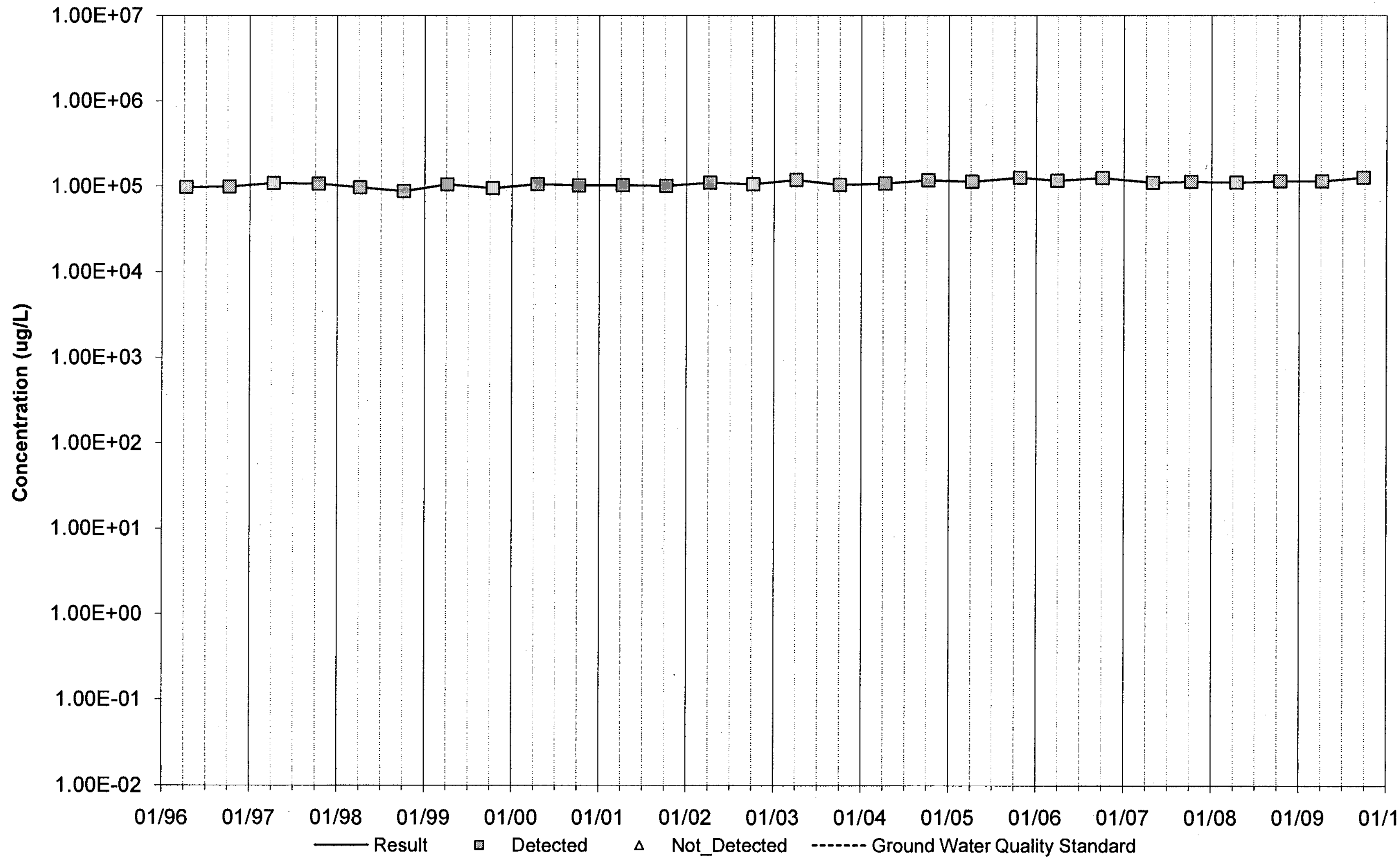
Monitoring Well: III
7440-70-2 (Calcium Metal)
Log Scale Concentrations

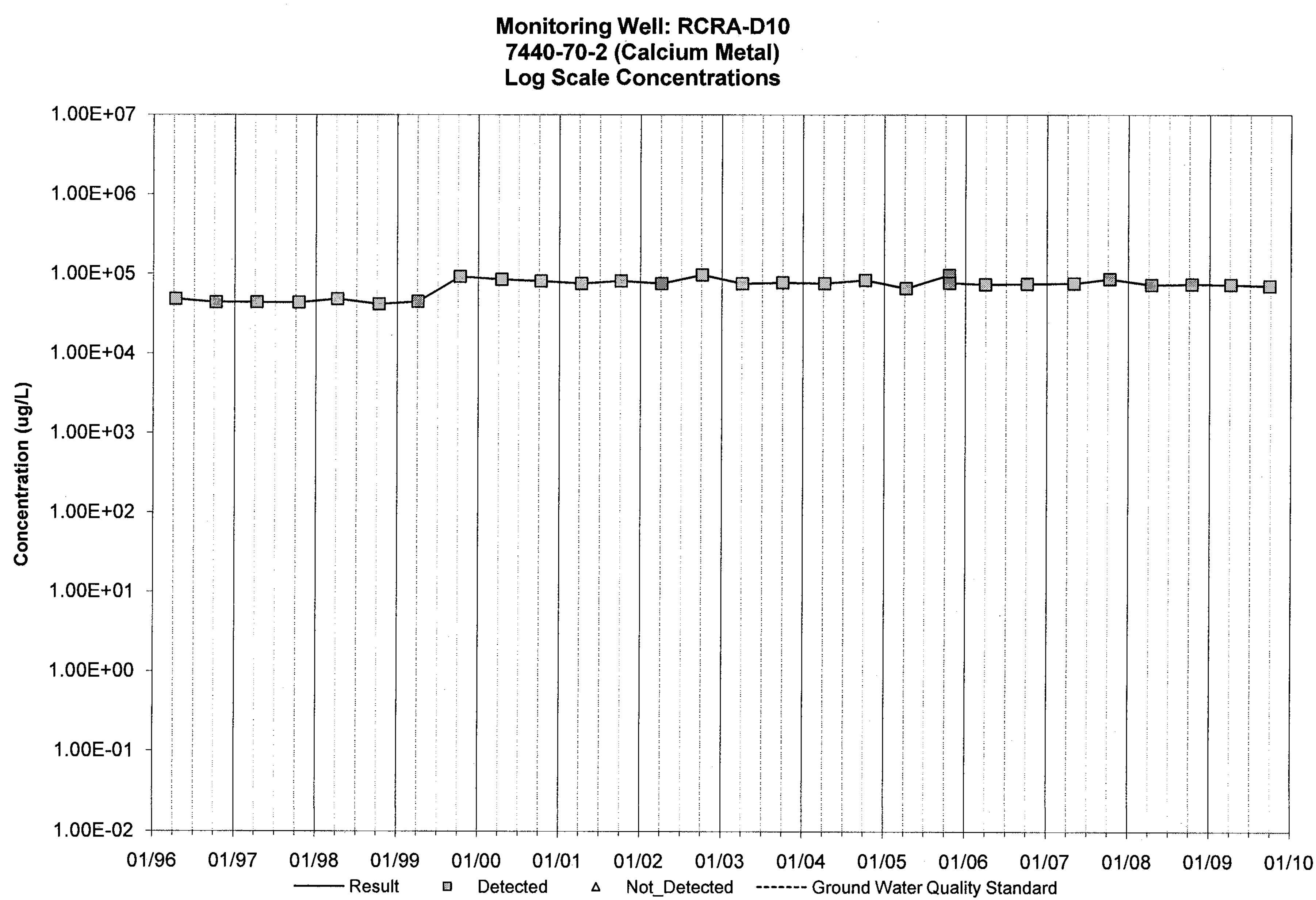




Monitoring Well: KKK
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

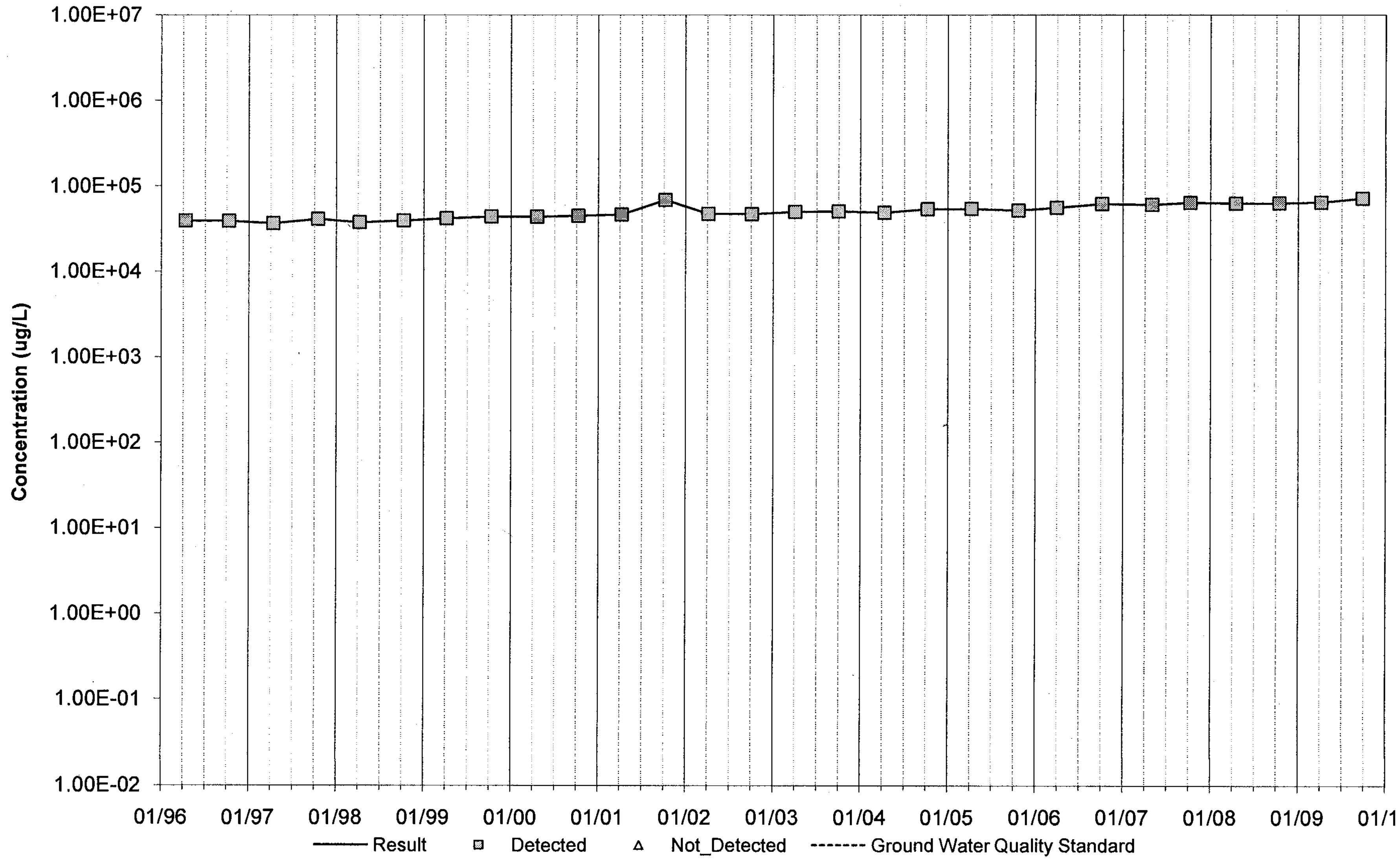
Monitoring Well: RCRA-D1
7440-70-2 (Calcium Metal)
Log Scale Concentrations



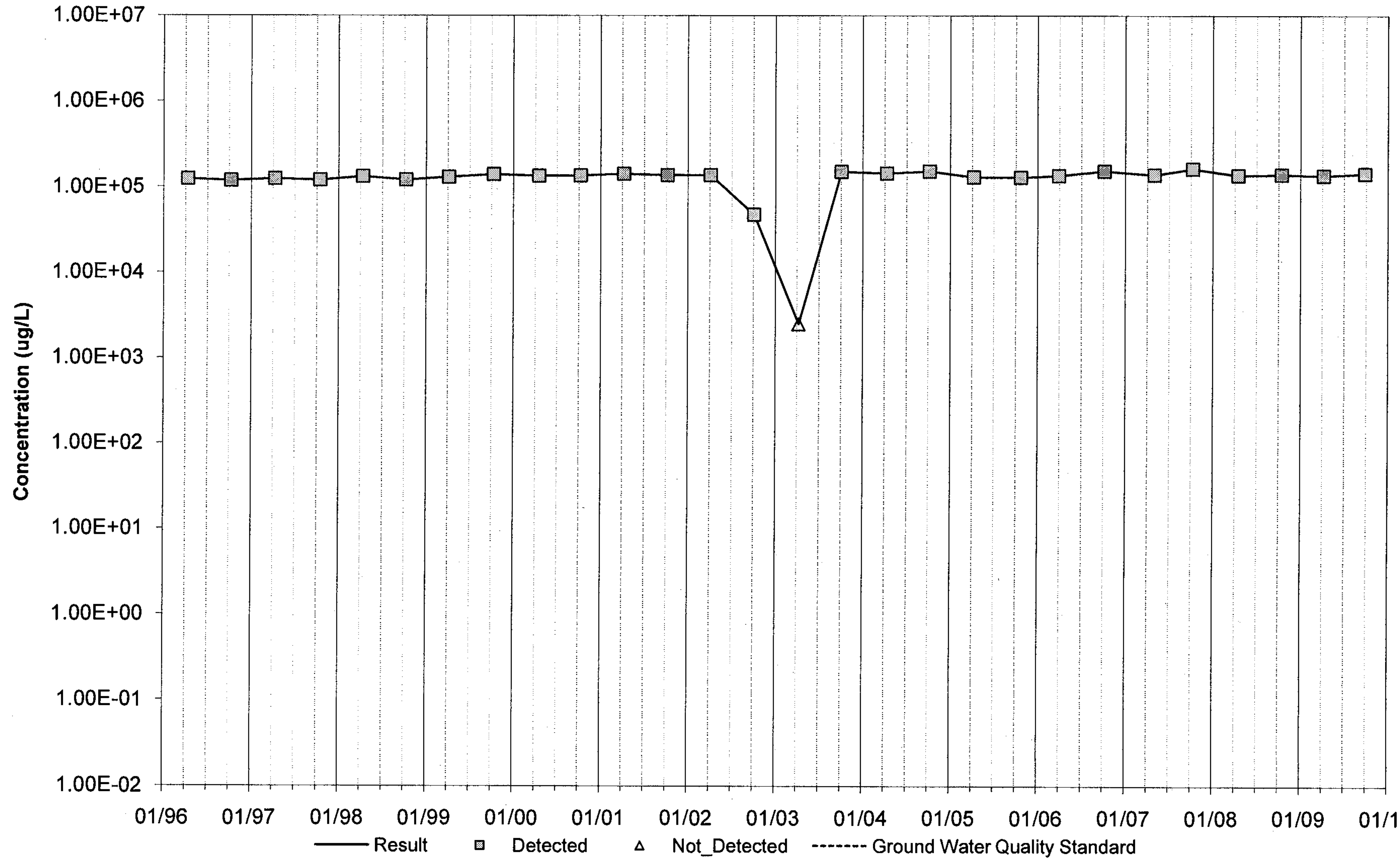


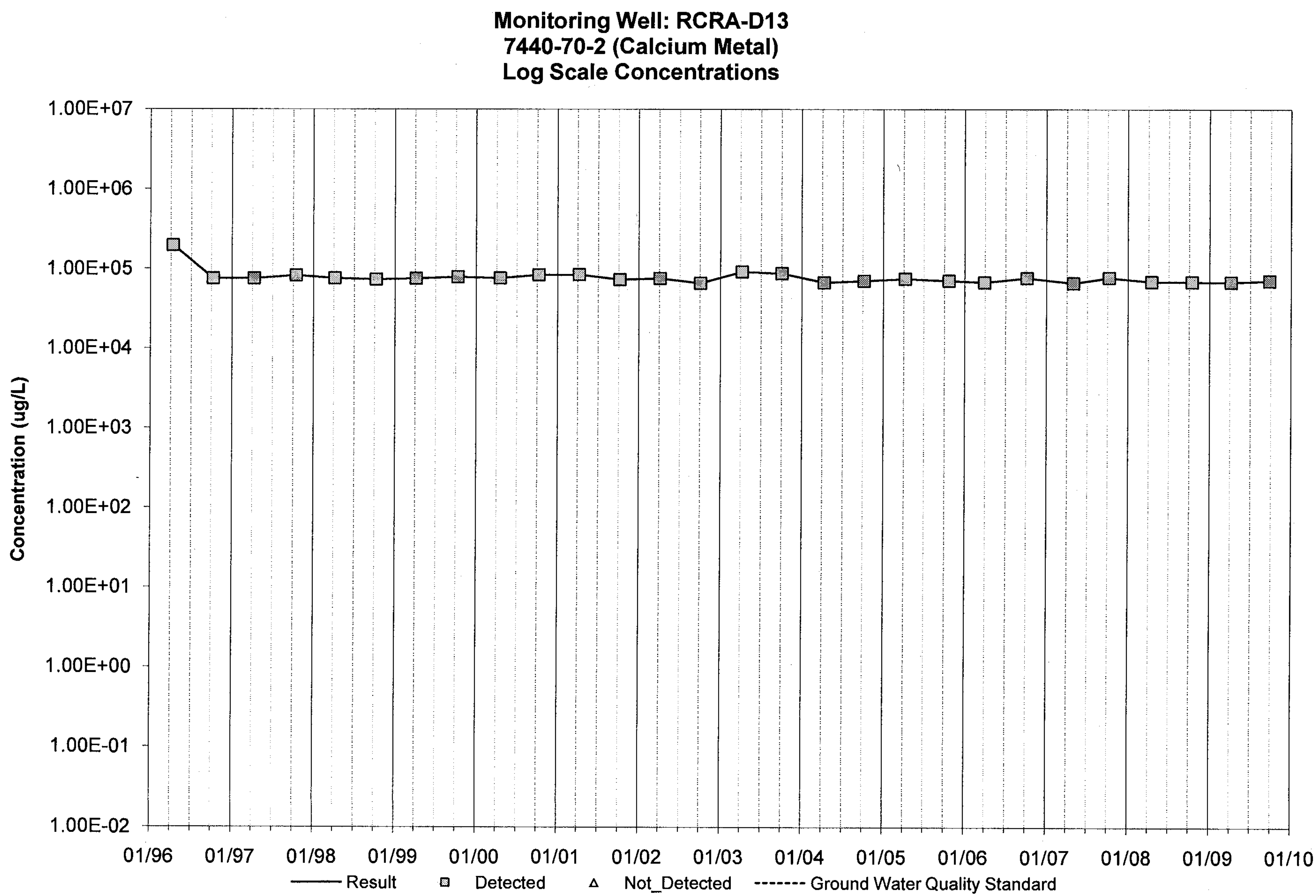
Monitoring Well: RCRA-D10
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D11
7440-70-2 (Calcium Metal)
Log Scale Concentrations



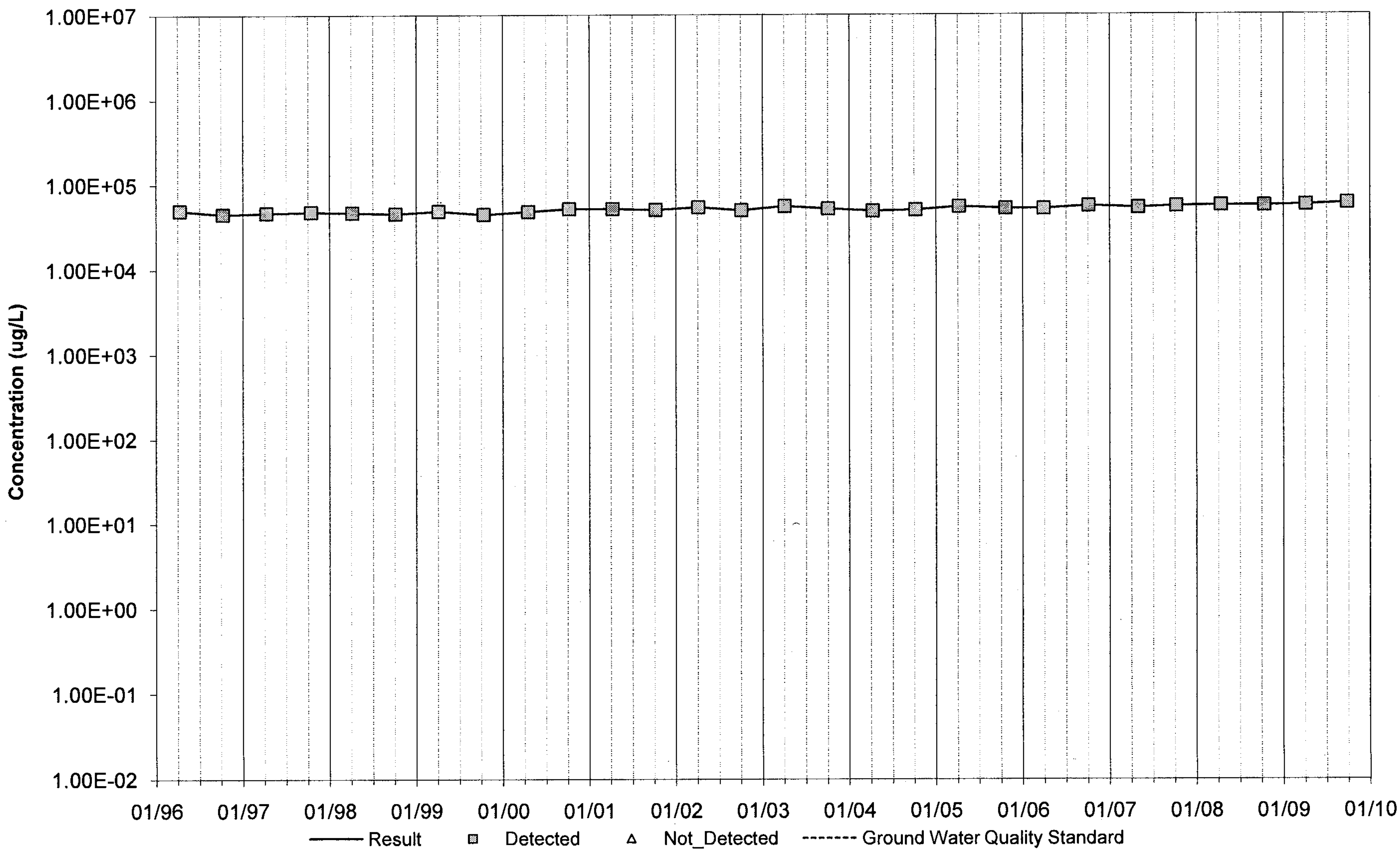
Monitoring Well: RCRA-D12
7440-70-2 (Calcium Metal)
Log Scale Concentrations



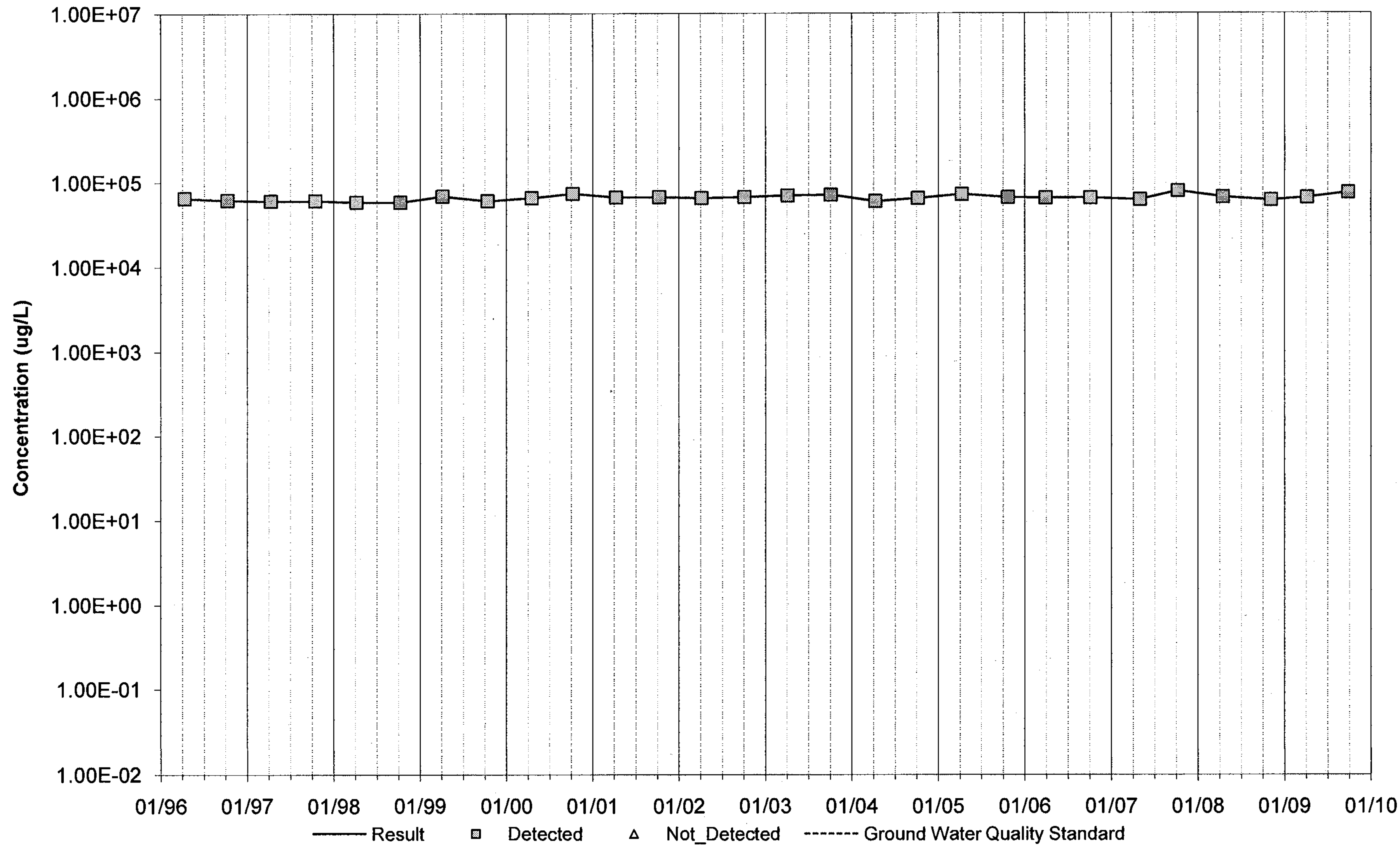


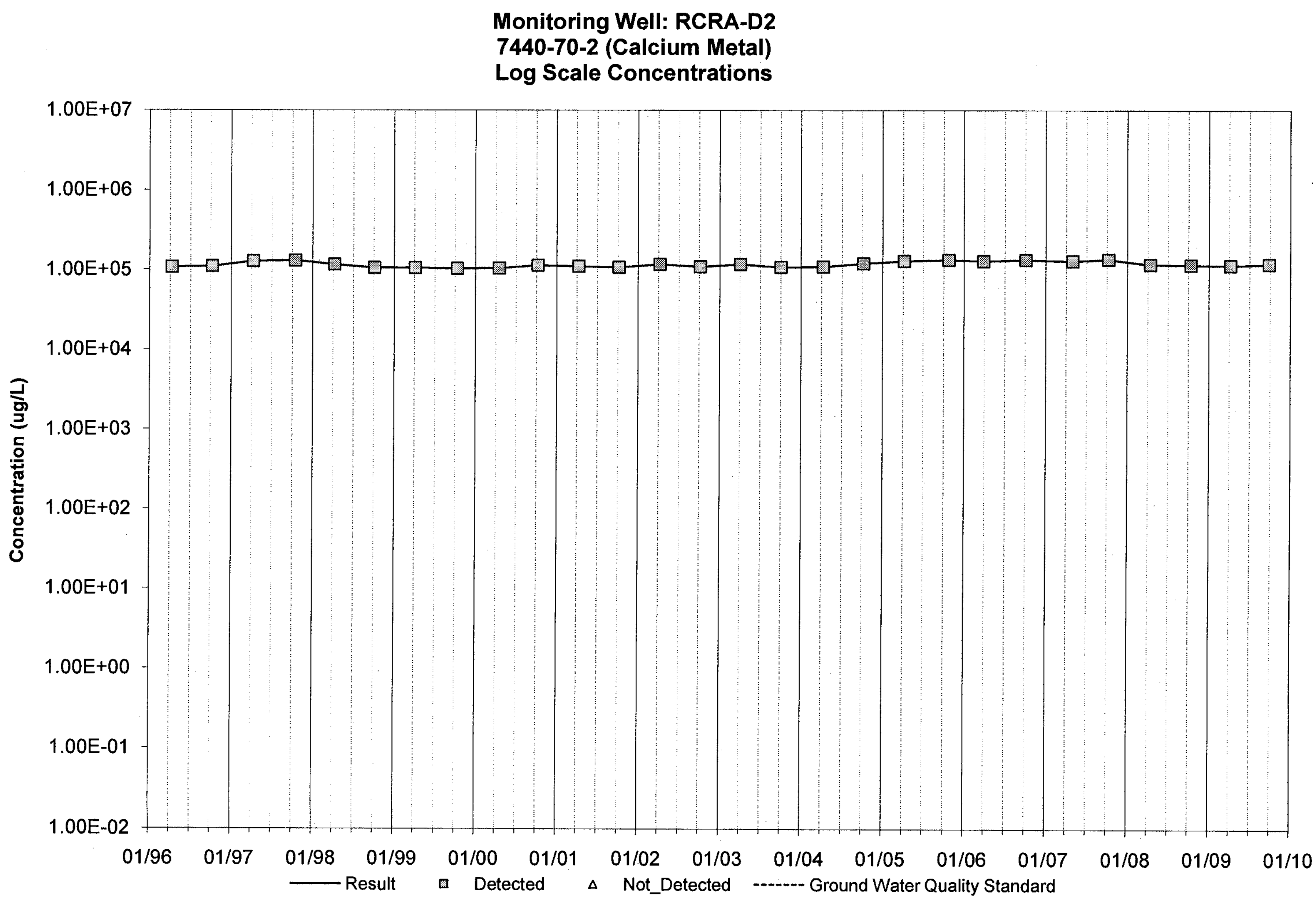
Monitoring Well: RCRA-D13
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D14
7440-70-2 (Calcium Metal)
Log Scale Concentrations

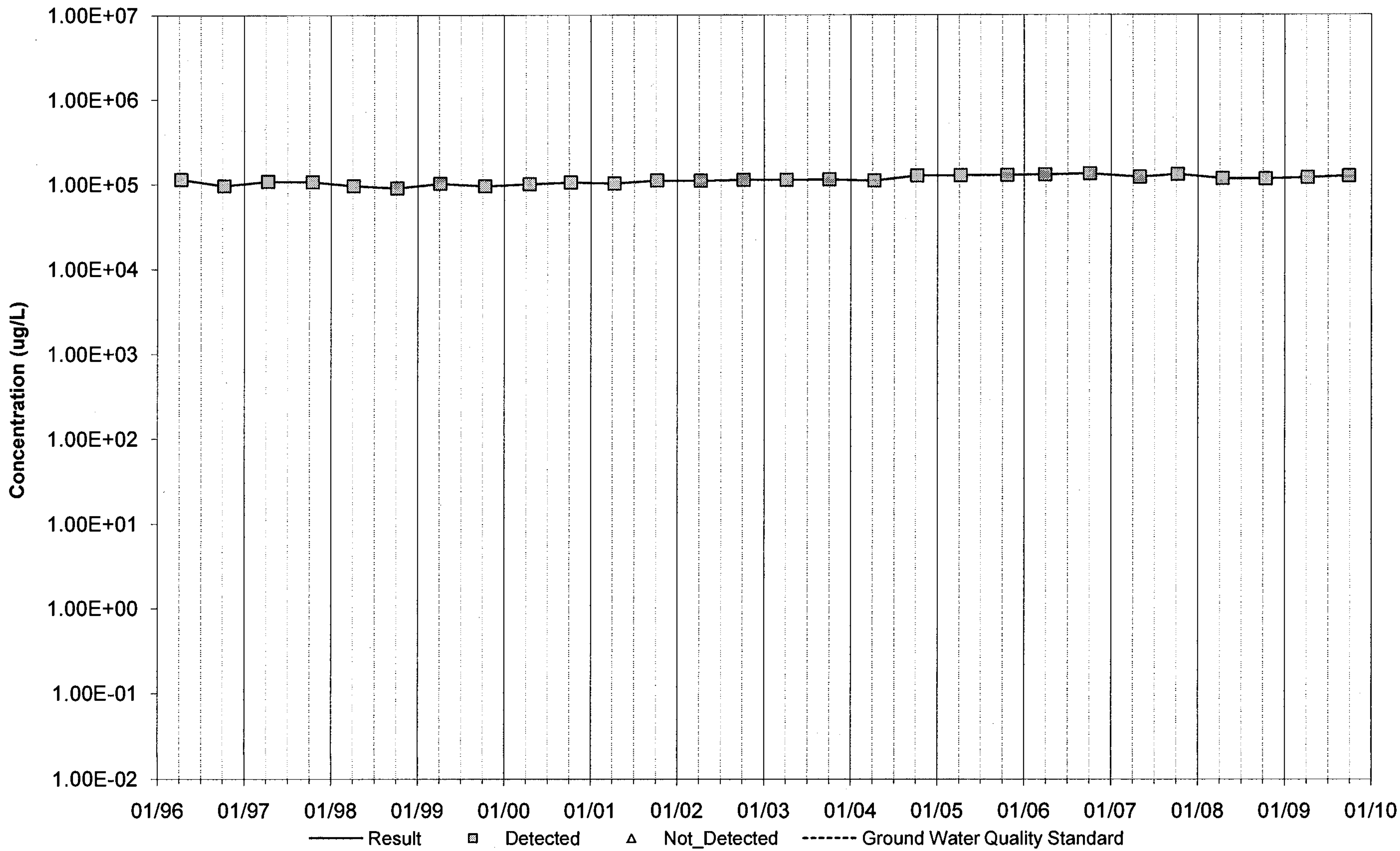


Monitoring Well: RCRA-D15
7440-70-2 (Calcium Metal)
Log Scale Concentrations

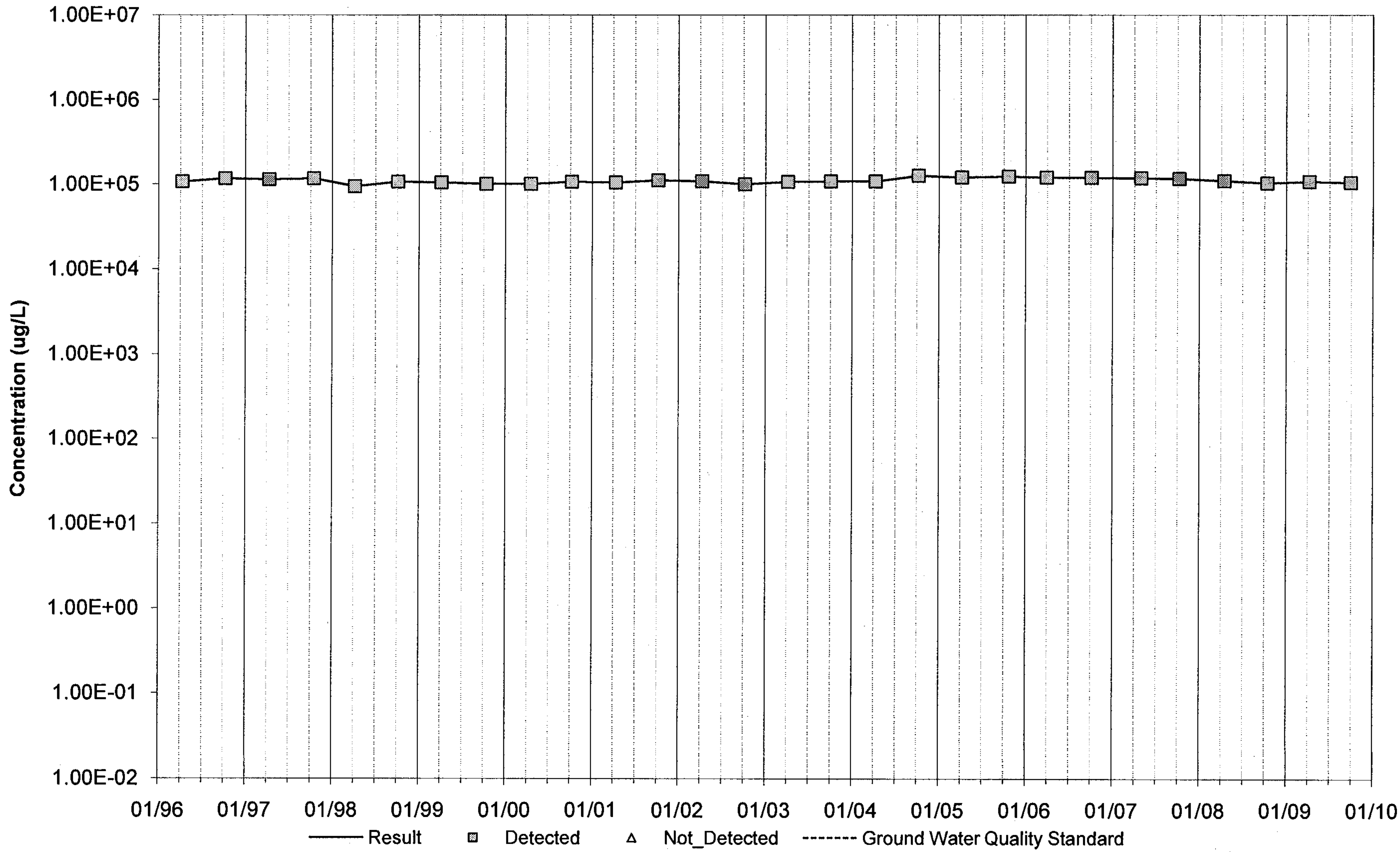


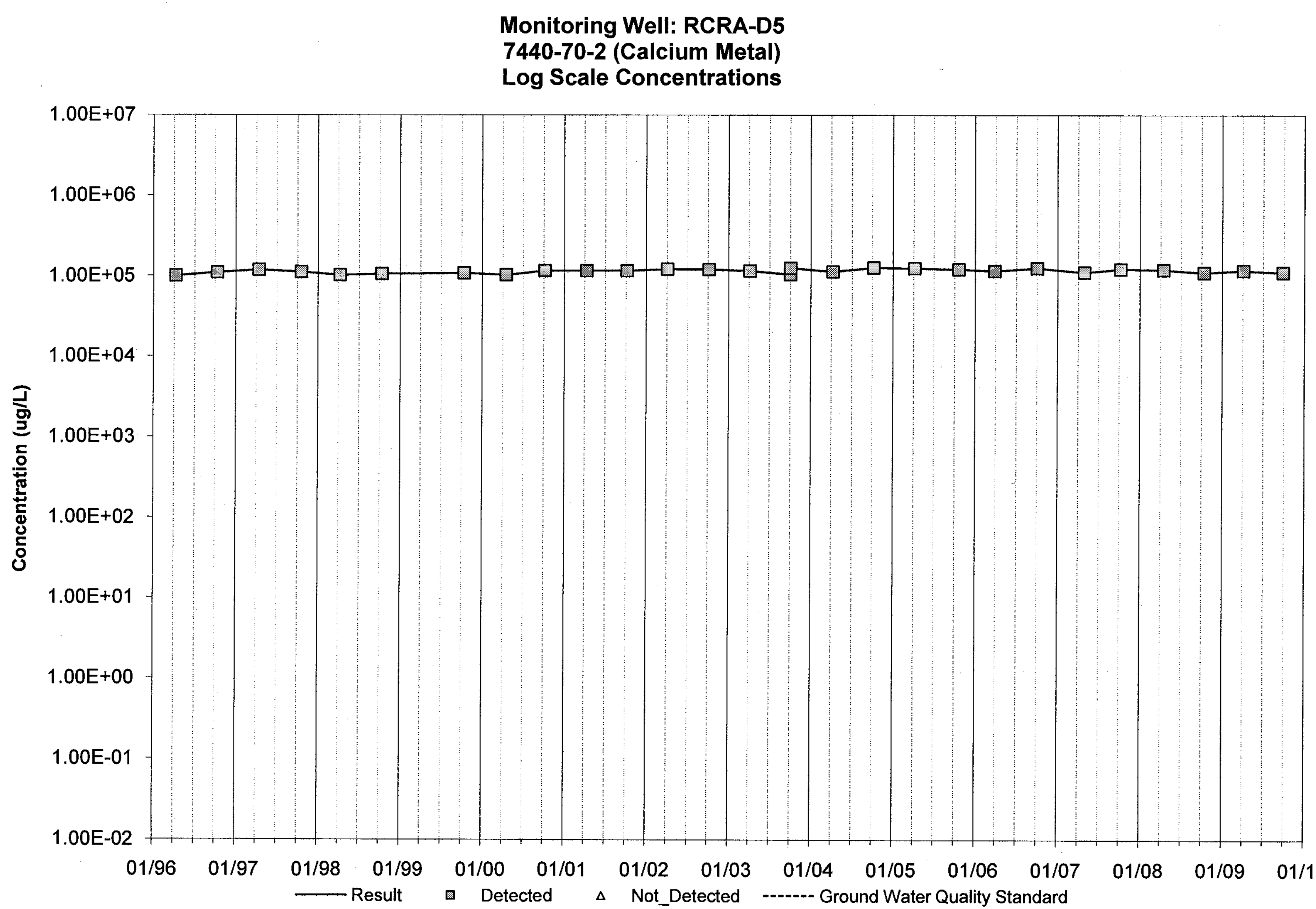

Monitoring Well: RCRA-D2
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D3
7440-70-2 (Calcium Metal)
Log Scale Concentrations

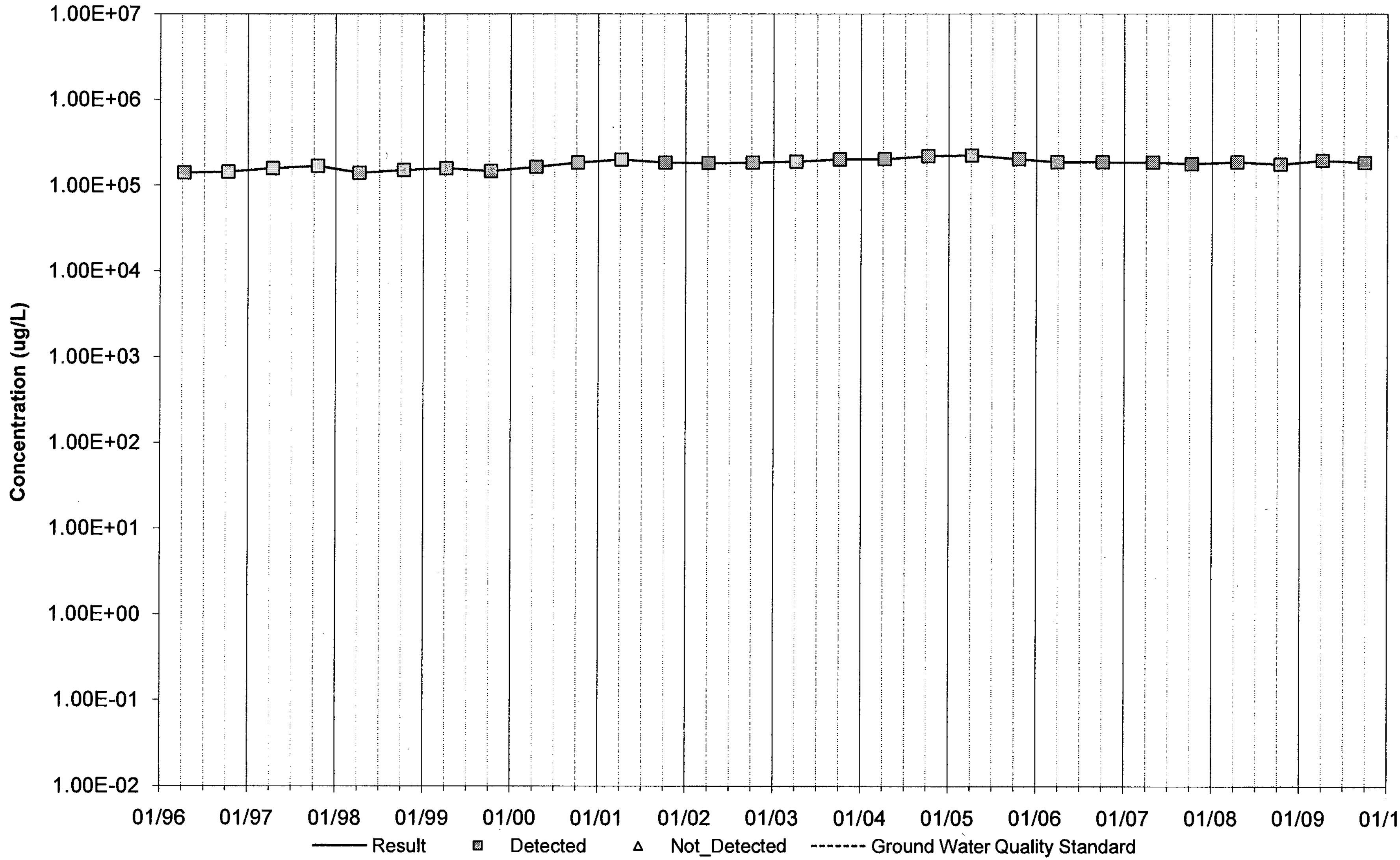


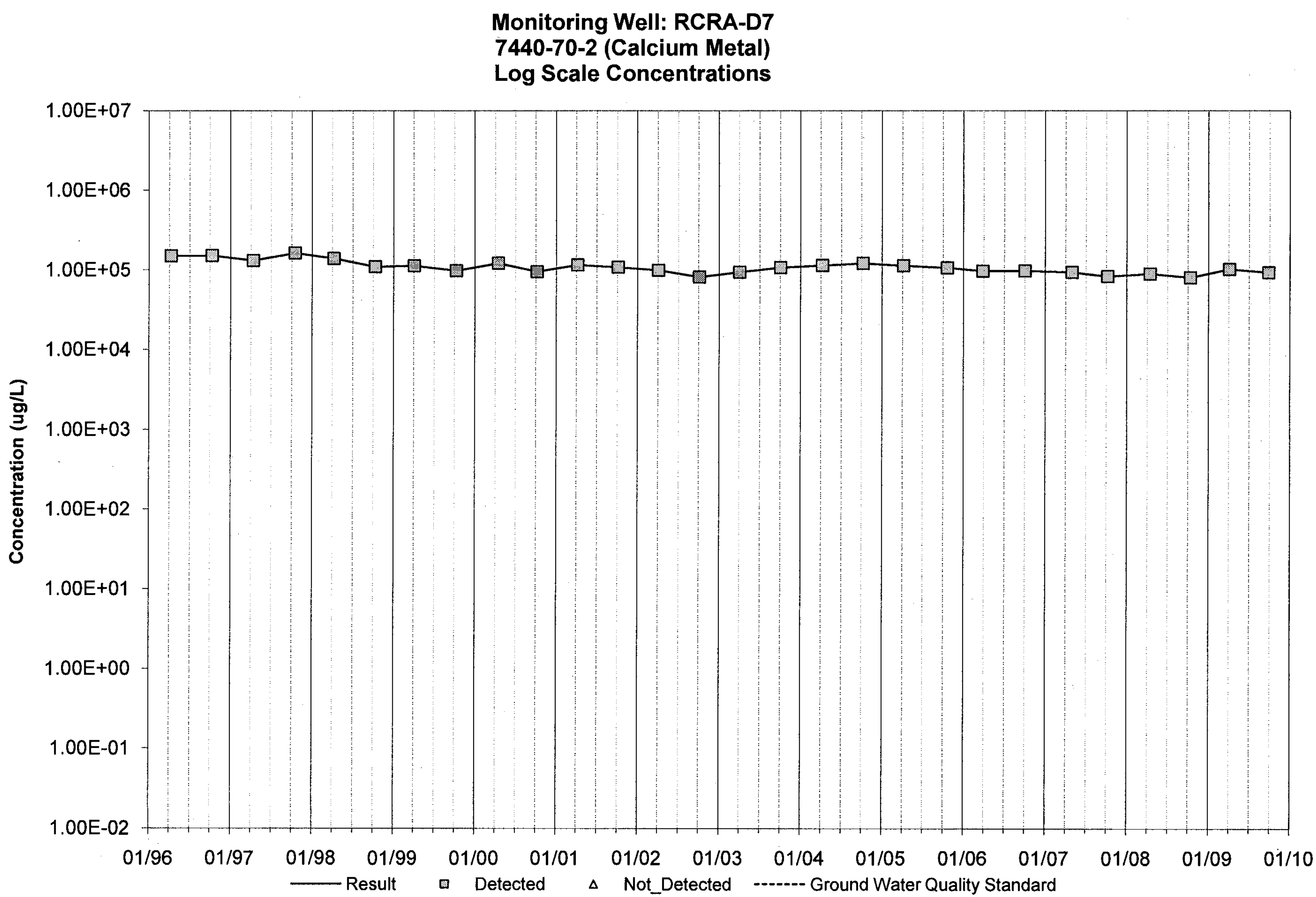
Monitoring Well: RCRA-D4
7440-70-2 (Calcium Metal)
Log Scale Concentrations




Monitoring Well: RCRA-D5
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

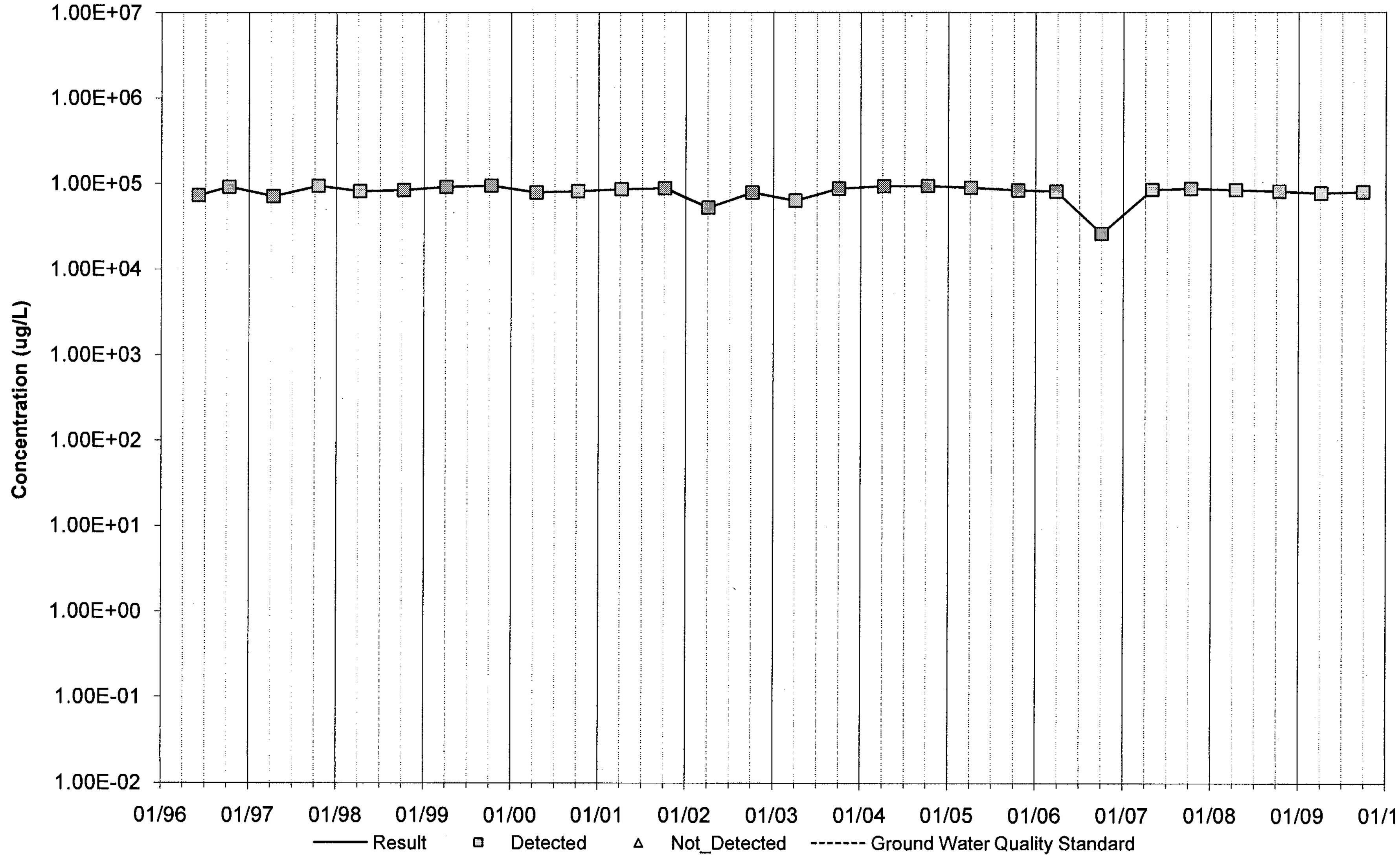
Monitoring Well: RCRA-D6
7440-70-2 (Calcium Metal)
Log Scale Concentrations

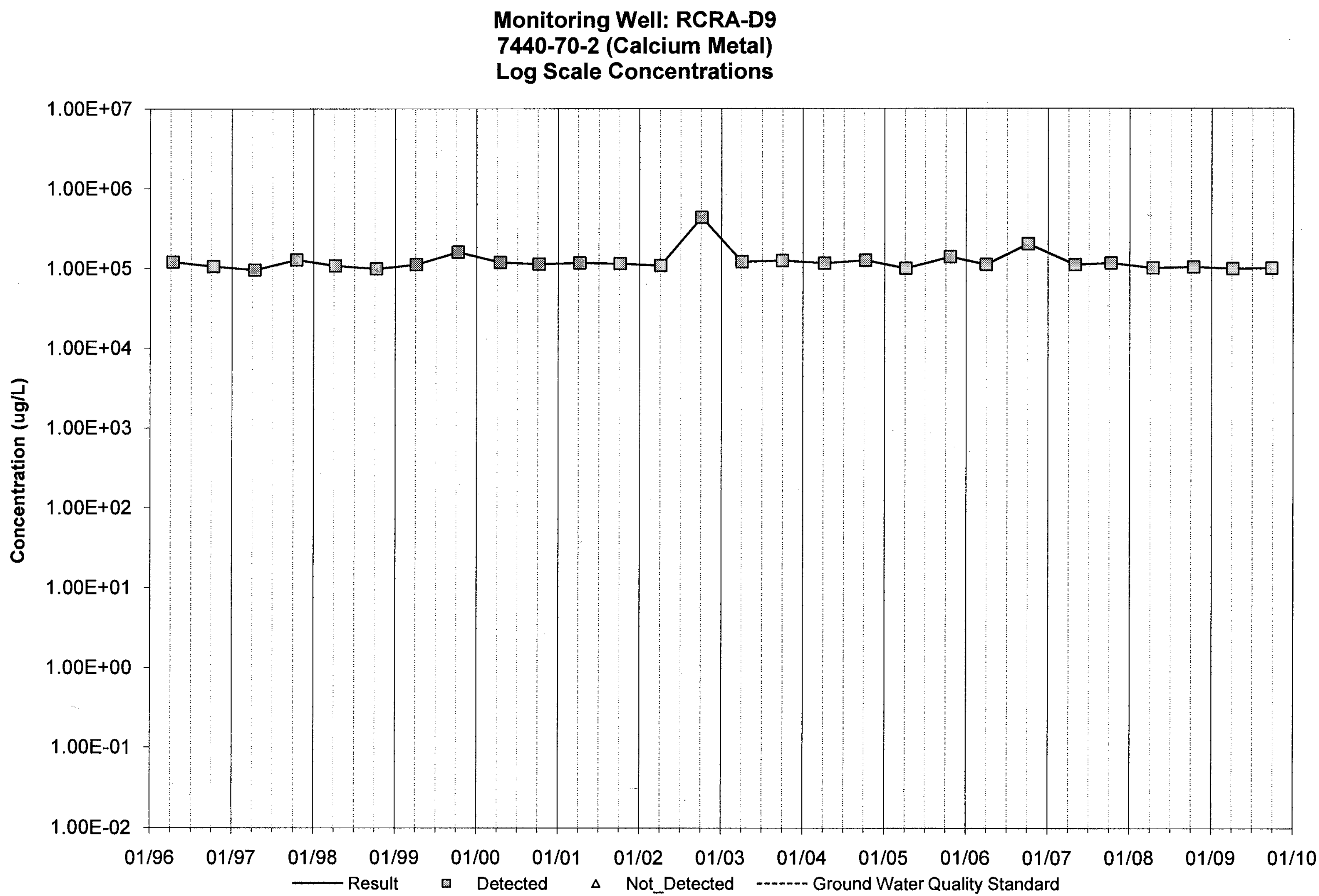




Monitoring Well: RCRA-D7
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

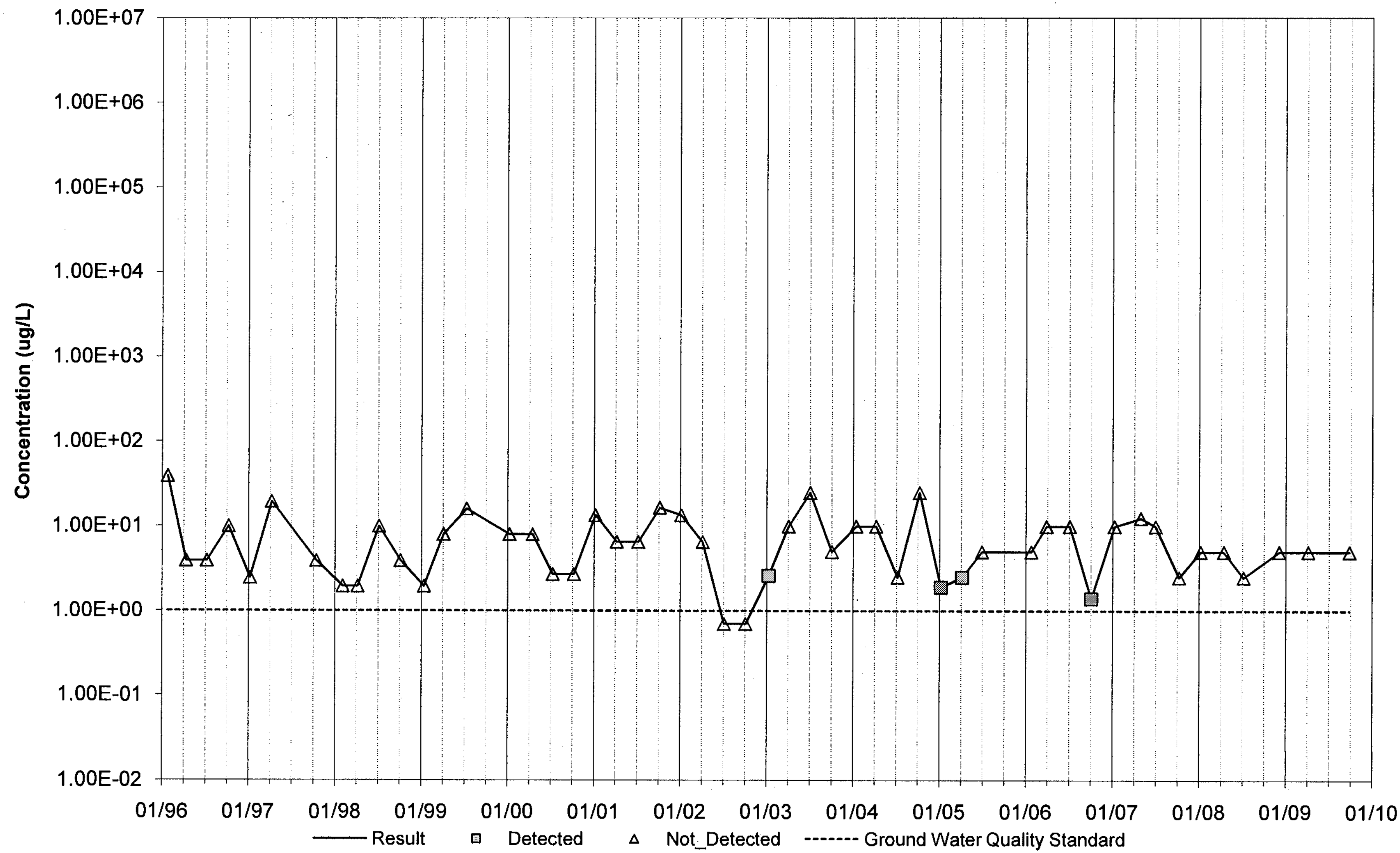
Monitoring Well: RCRA-D8
7440-70-2 (Calcium Metal)
Log Scale Concentrations

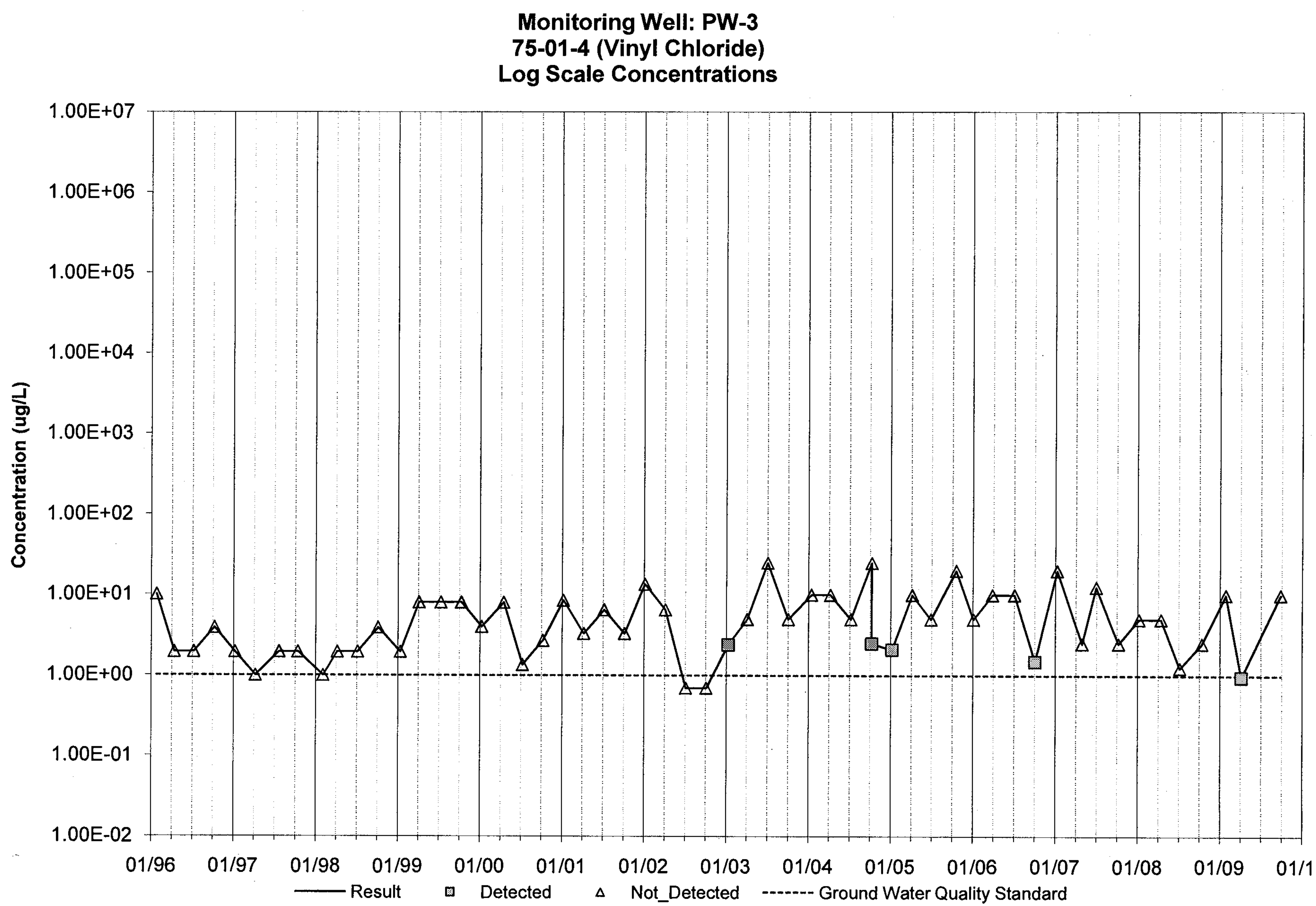




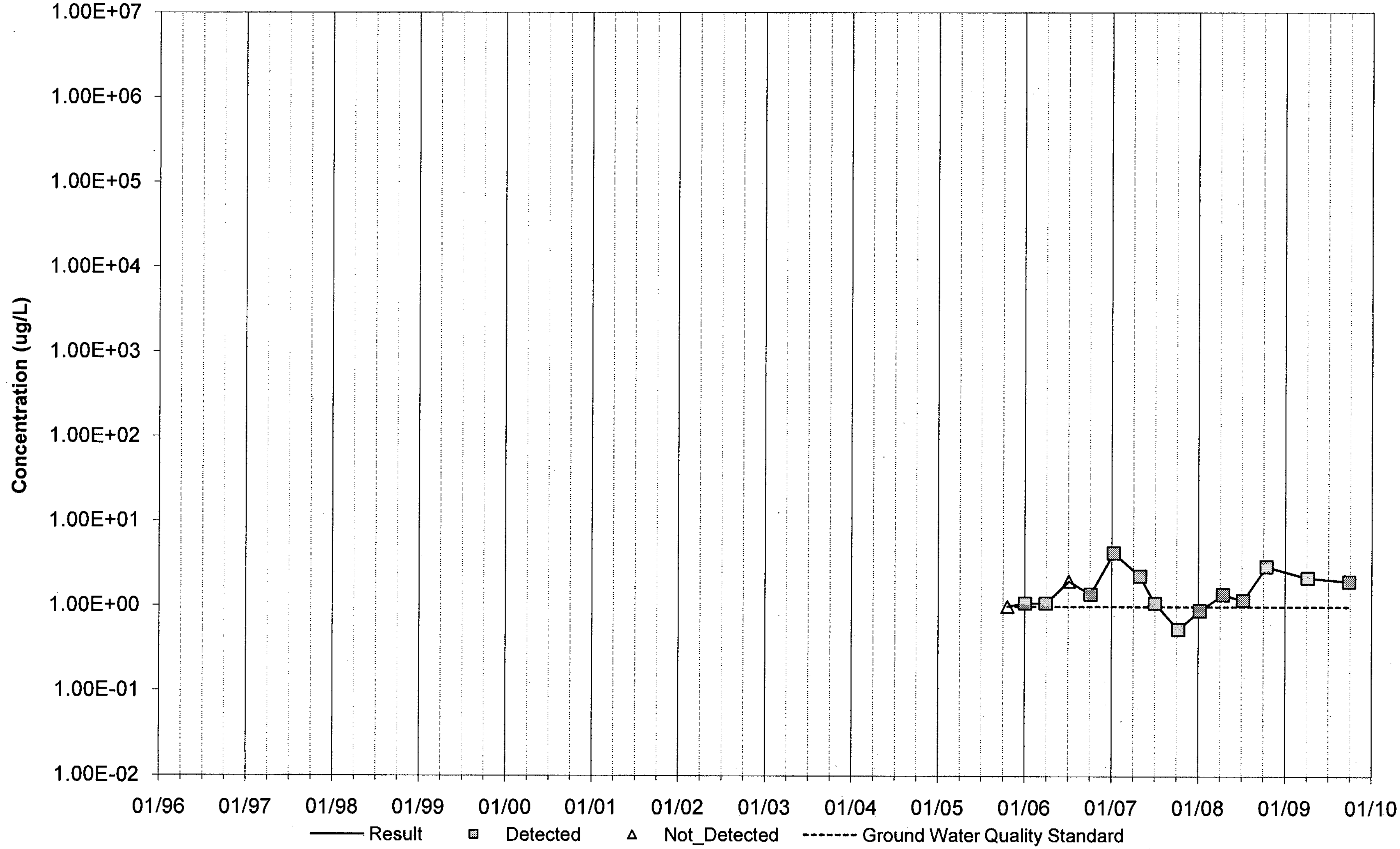
Monitoring Well: RCRA-D9
7440-70-2 (Calcium Metal)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: PW-2
75-01-4 (Vinyl Chloride)
Log Scale Concentrations

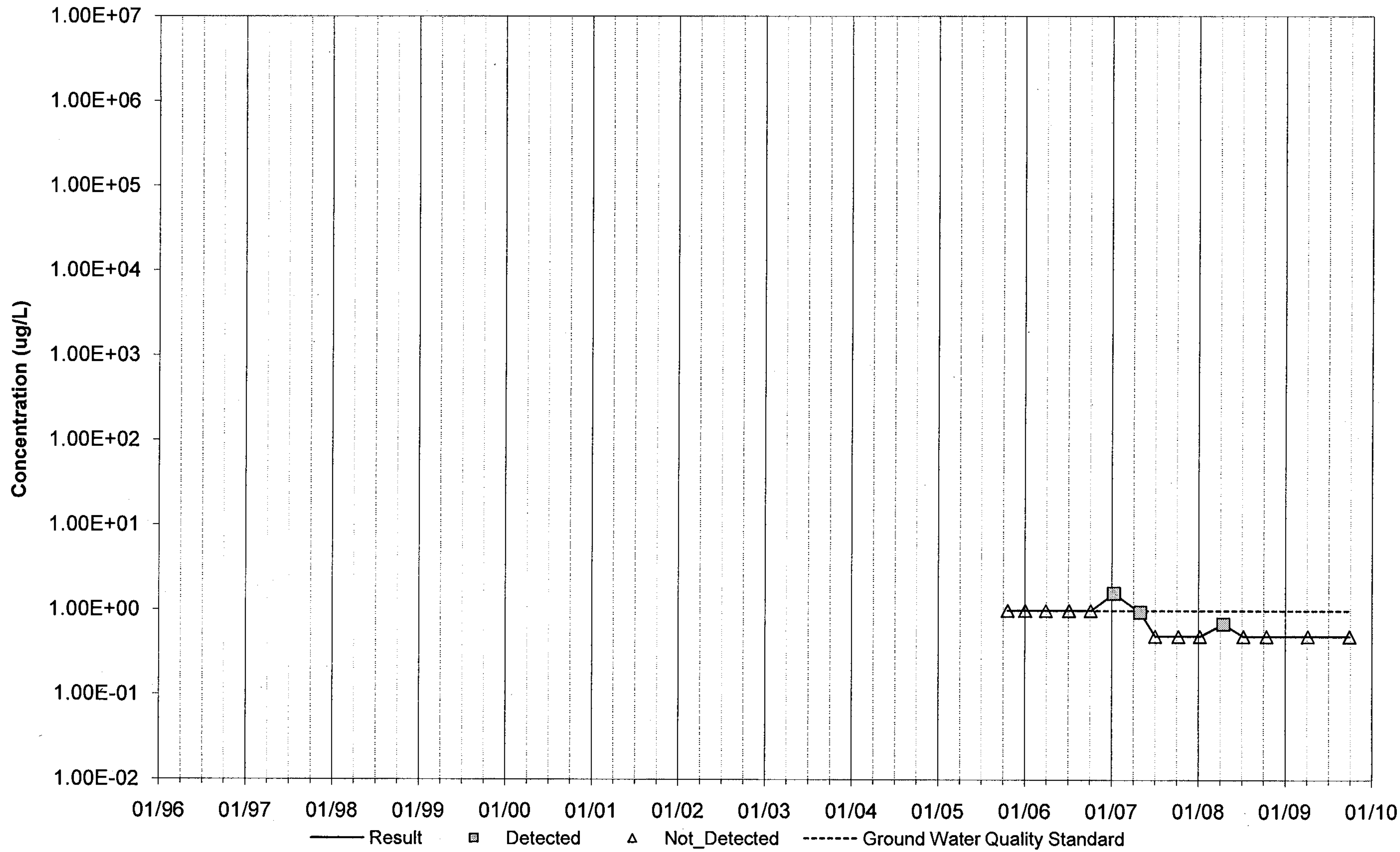



Monitoring Well: PW-3
75-01-4 (Vinyl Chloride)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

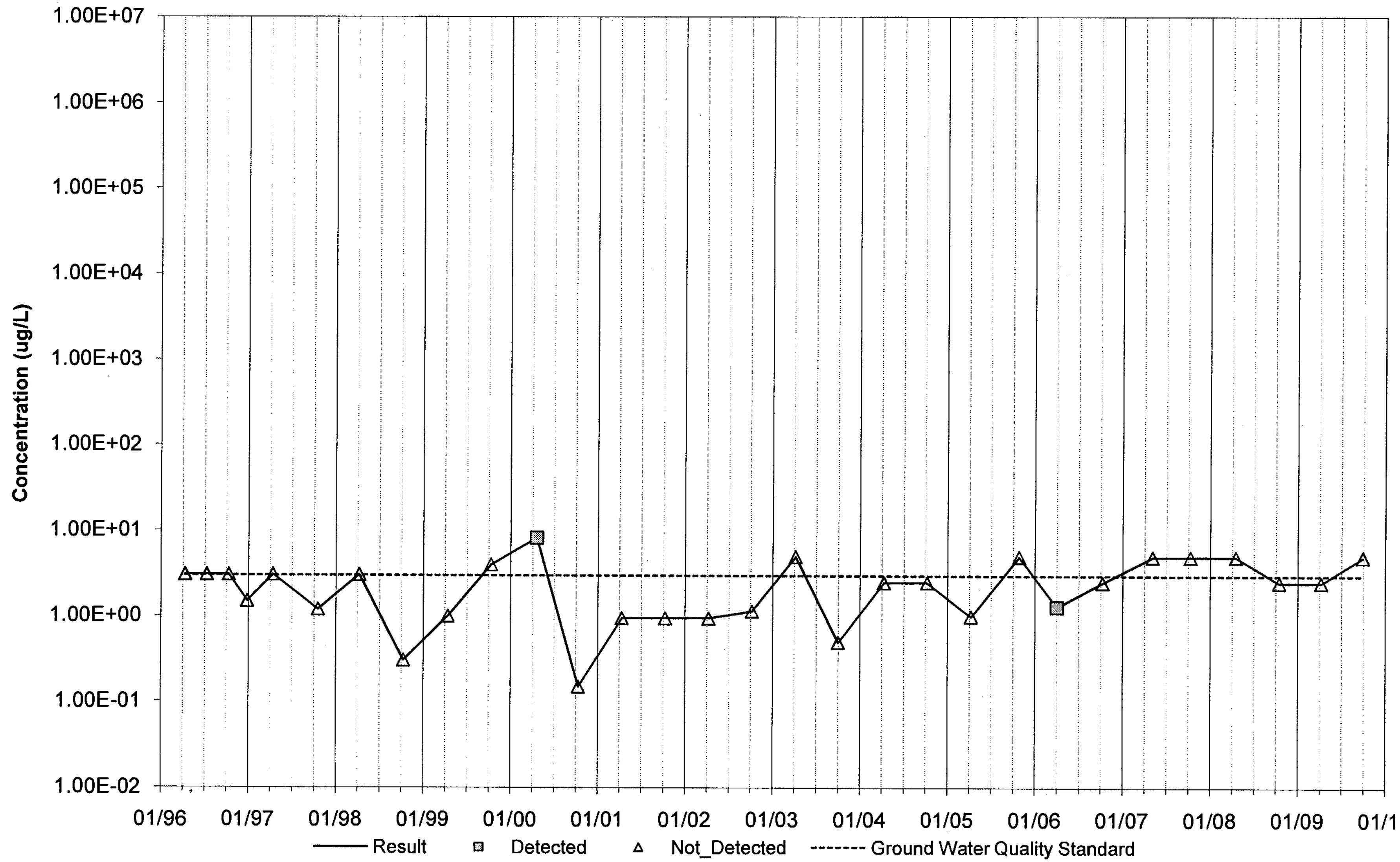
Monitoring Well: TT P1
75-01-4 (Vinyl Chloride)
Log Scale Concentrations



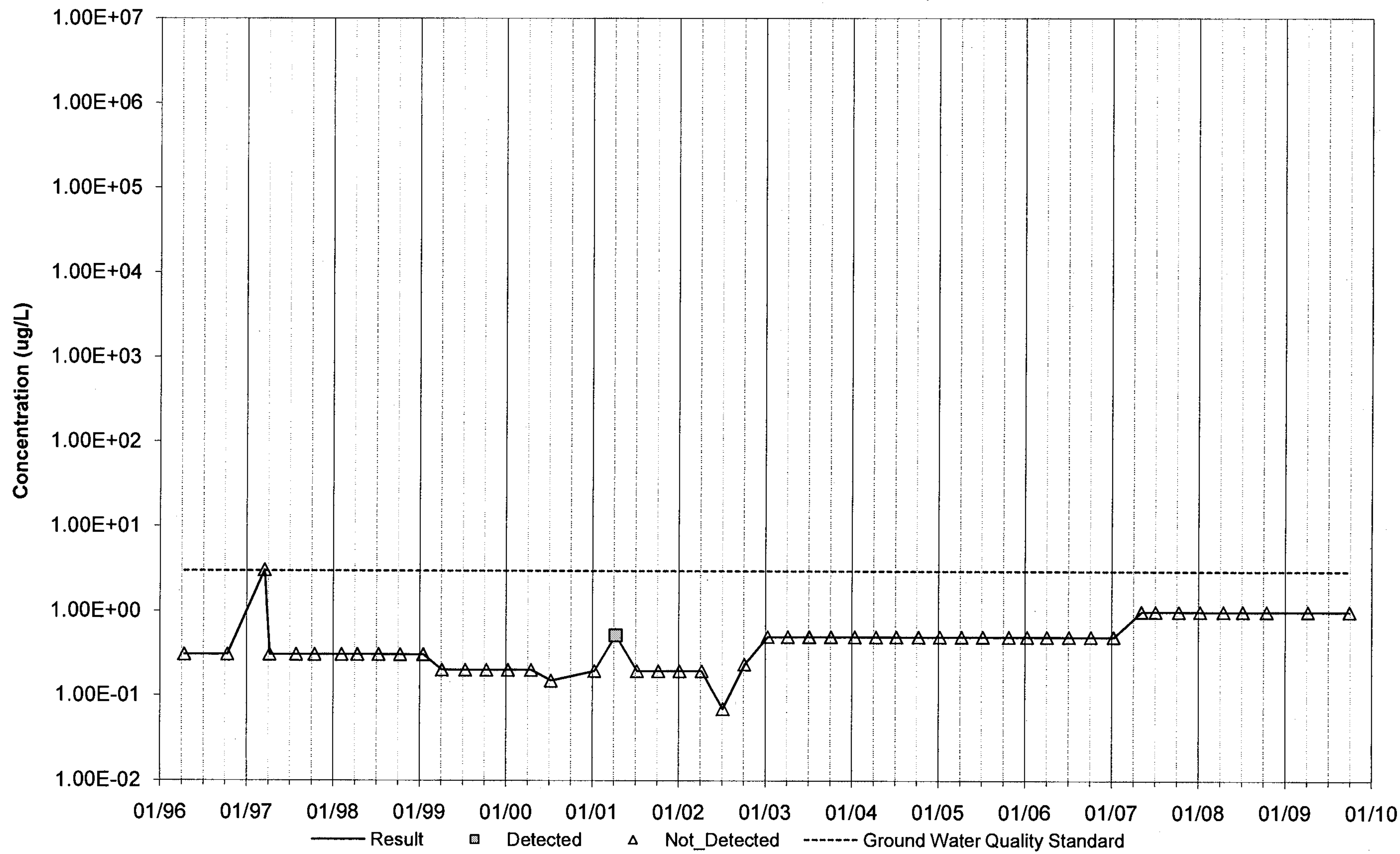
Monitoring Well: TT P3
75-01-4 (Vinyl Chloride)
Log Scale Concentrations



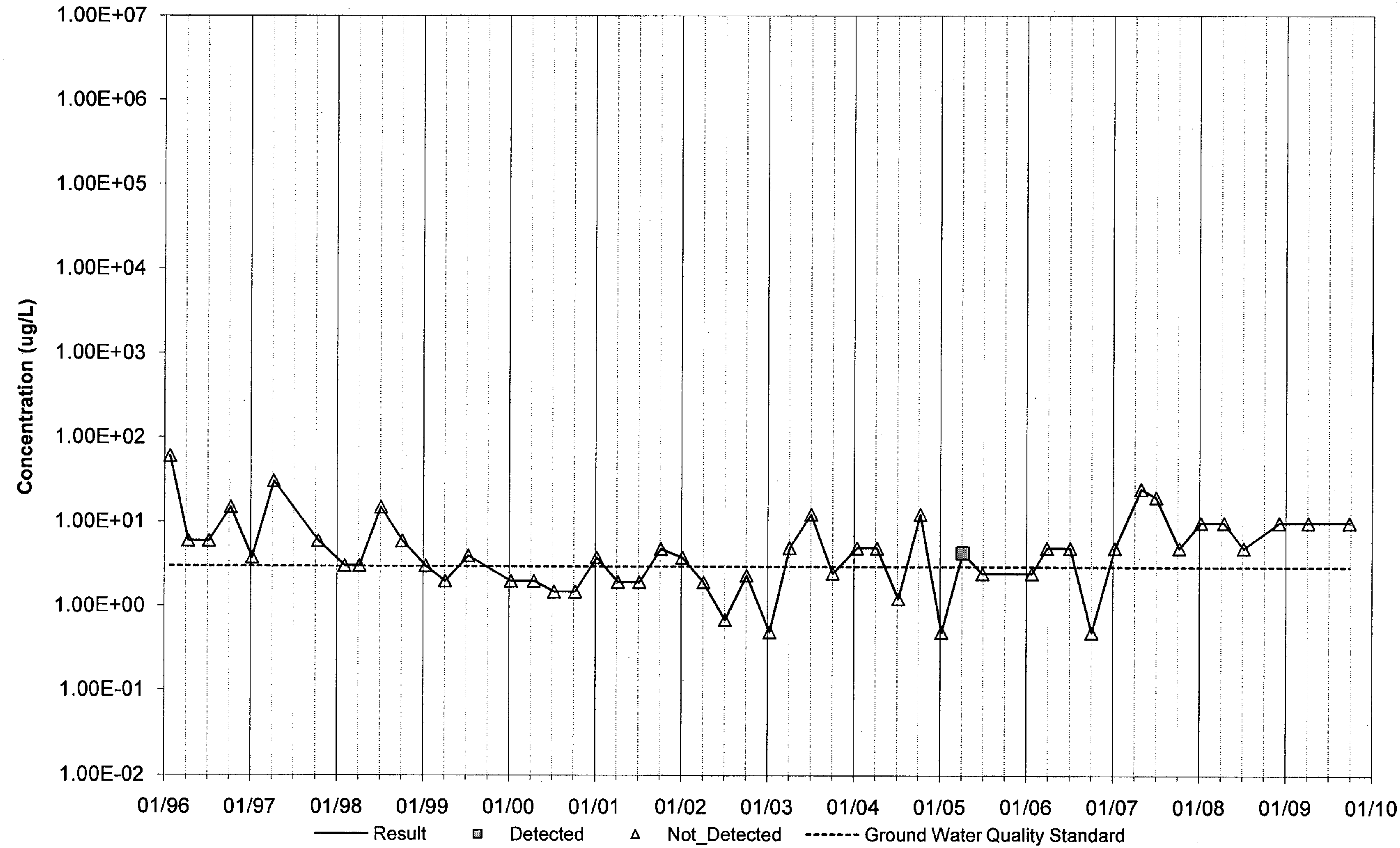
Monitoring Well: 42R
75-09-2 (Methylene Chloride)
Log Scale Concentrations

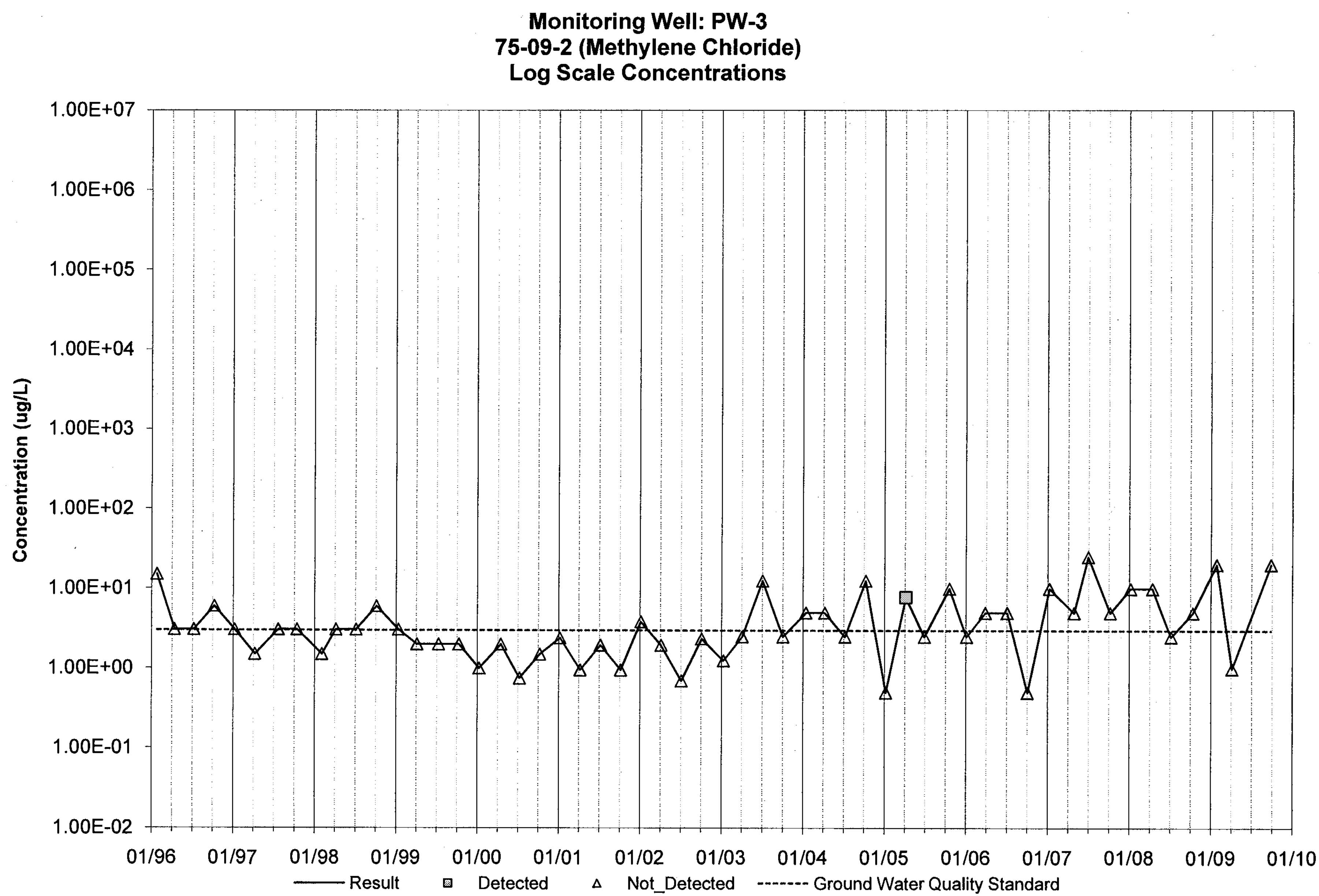


Monitoring Well: AAA
75-09-2 (Methylene Chloride)
Log Scale Concentrations



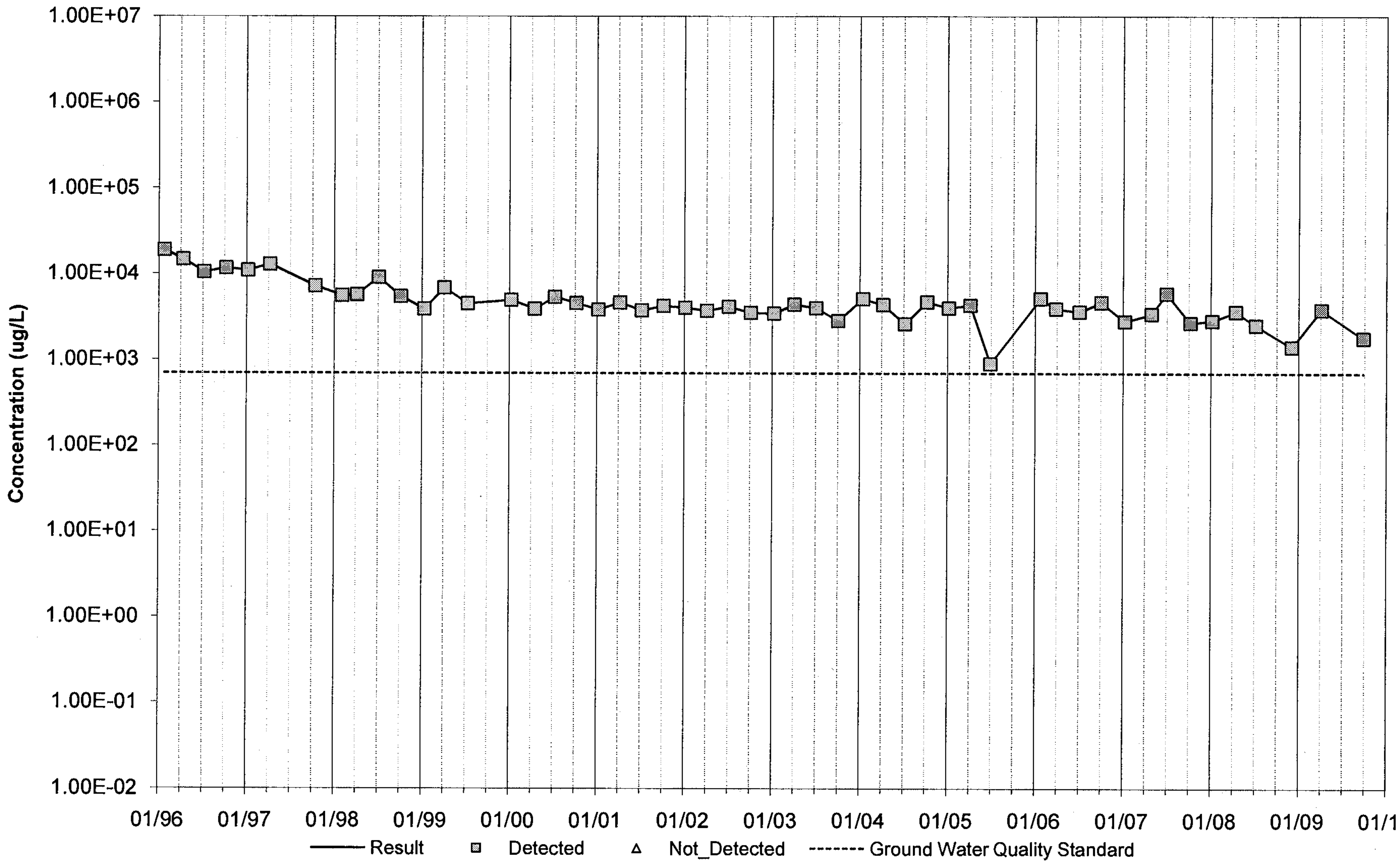
Monitoring Well: PW-2
75-09-2 (Methylene Chloride)
Log Scale Concentrations



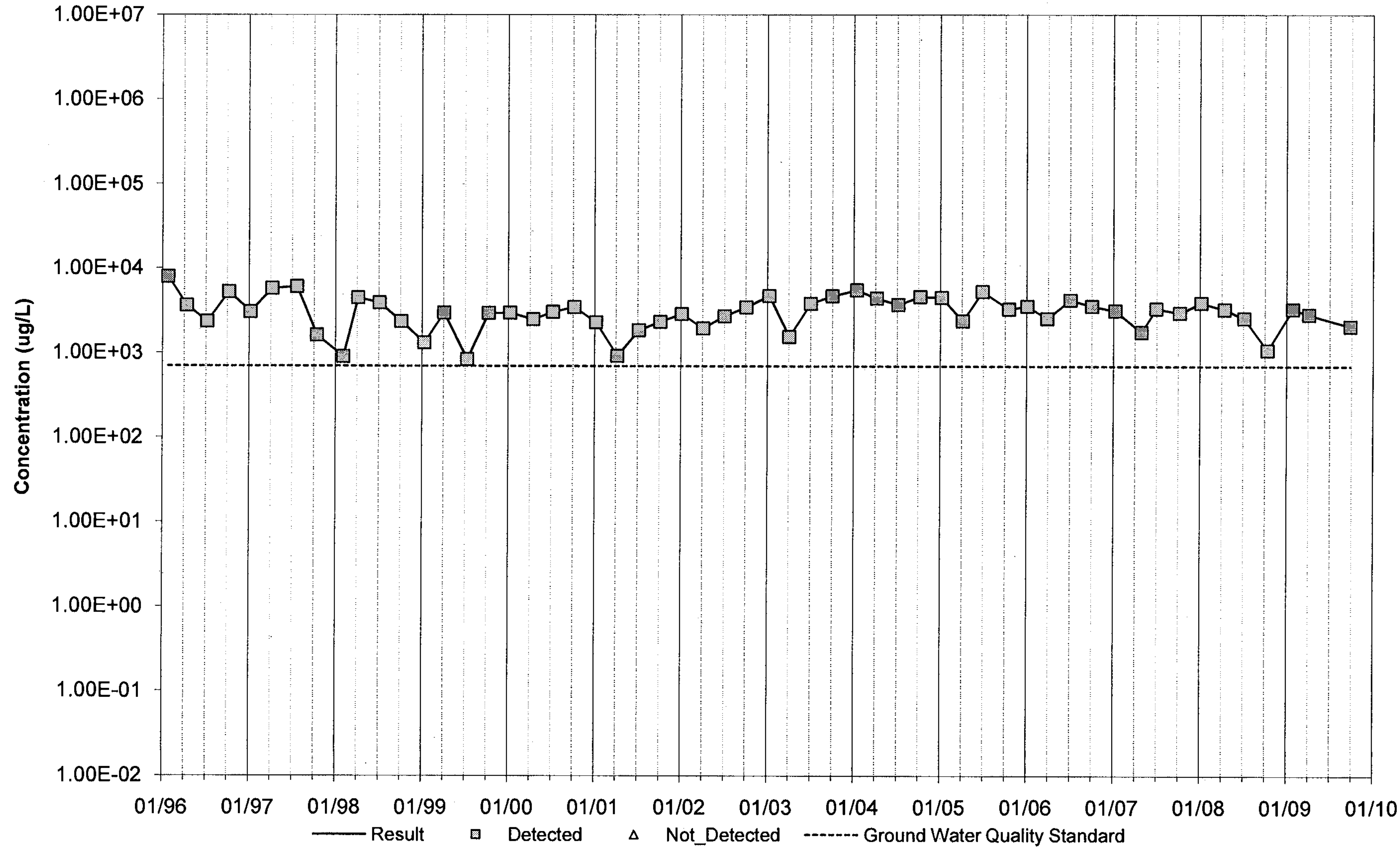


Monitoring Well: PW-3
75-09-2 (Methylene Chloride)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

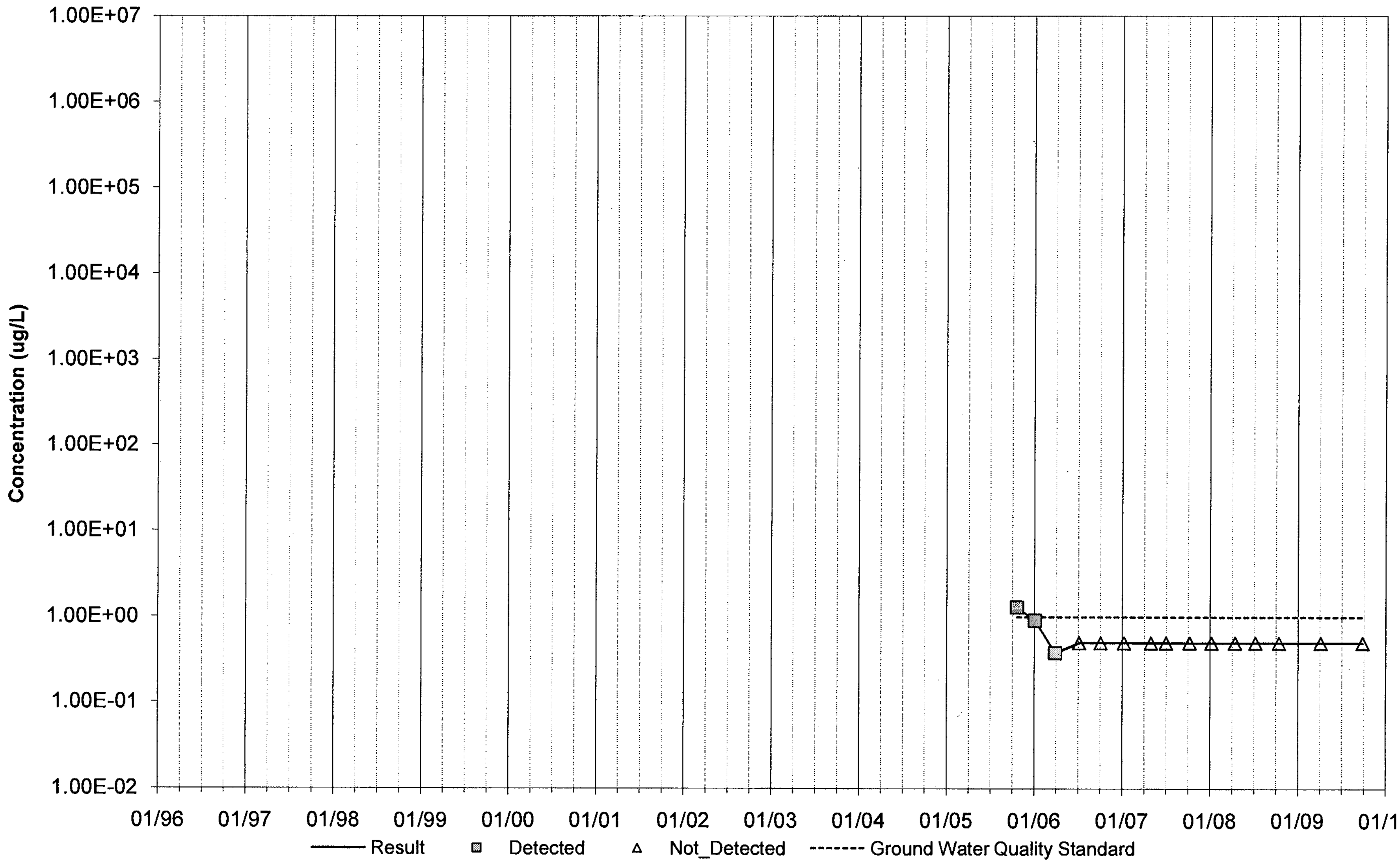
Monitoring Well: PW-2
75-15-0 (Carbon Disulfide)
Log Scale Concentrations



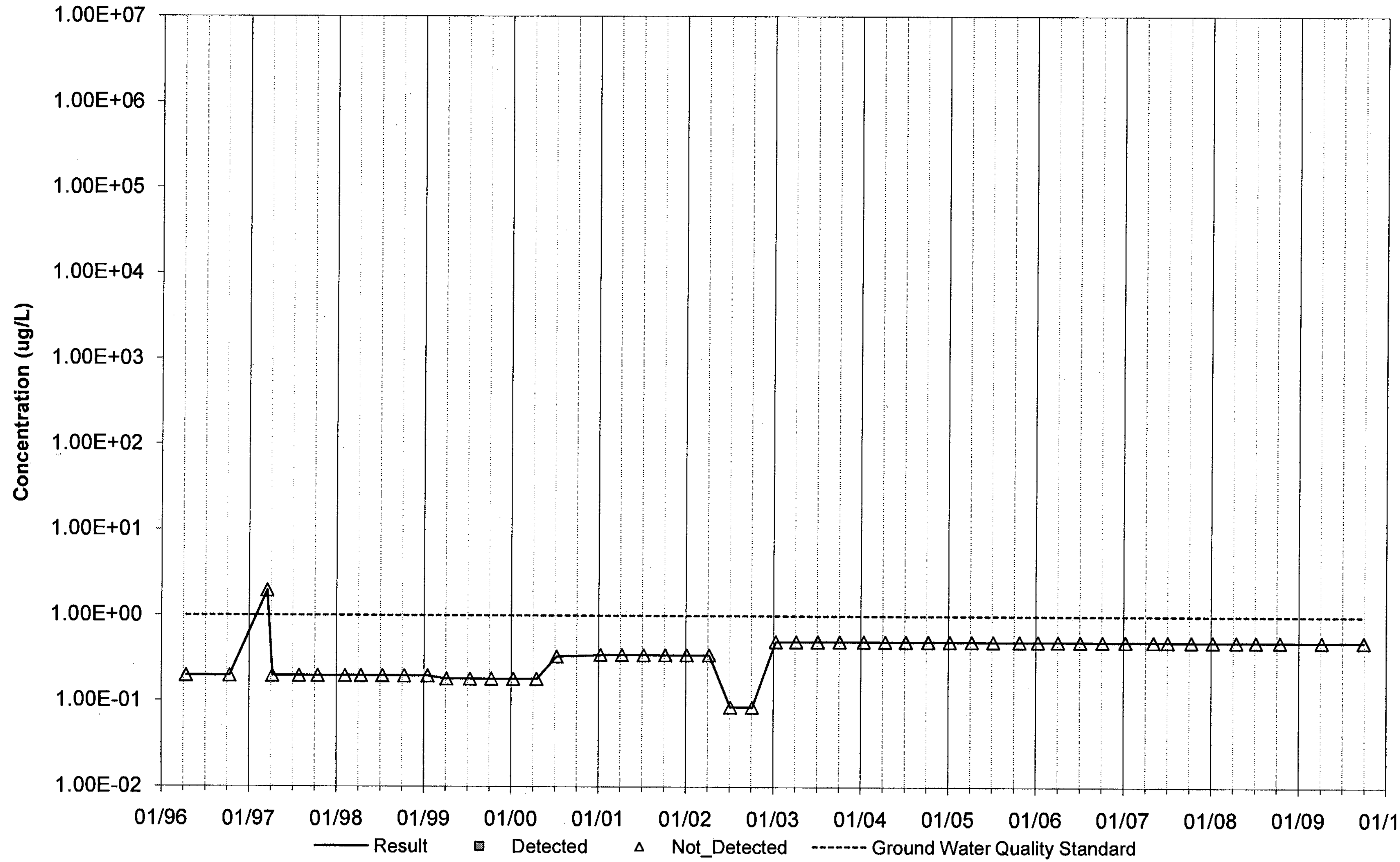
Monitoring Well: PW-3
75-15-0 (Carbon Disulfide)
Log Scale Concentrations



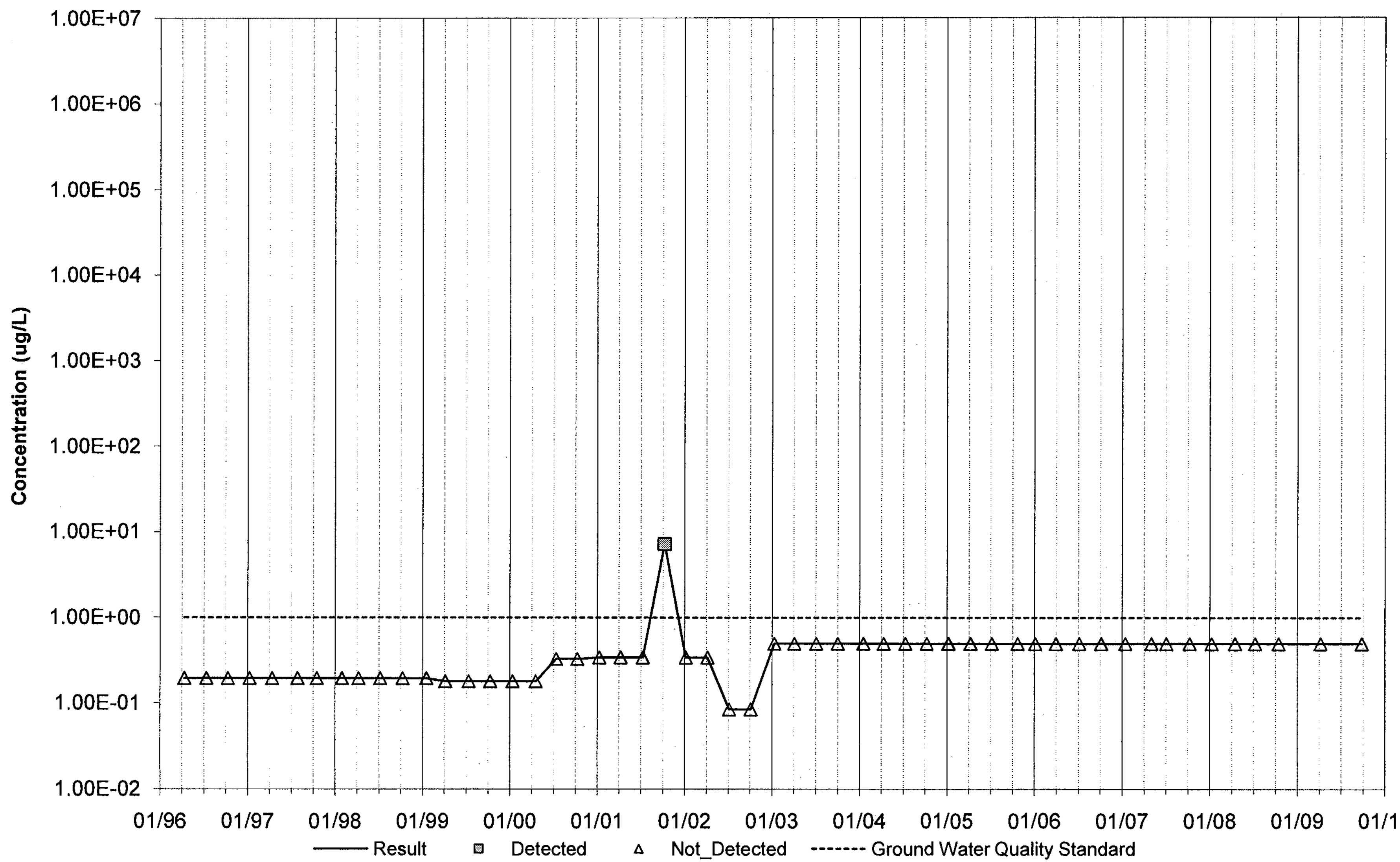
Monitoring Well: SS P1
75-27-4 (Bromodichloromethane)
Log Scale Concentrations



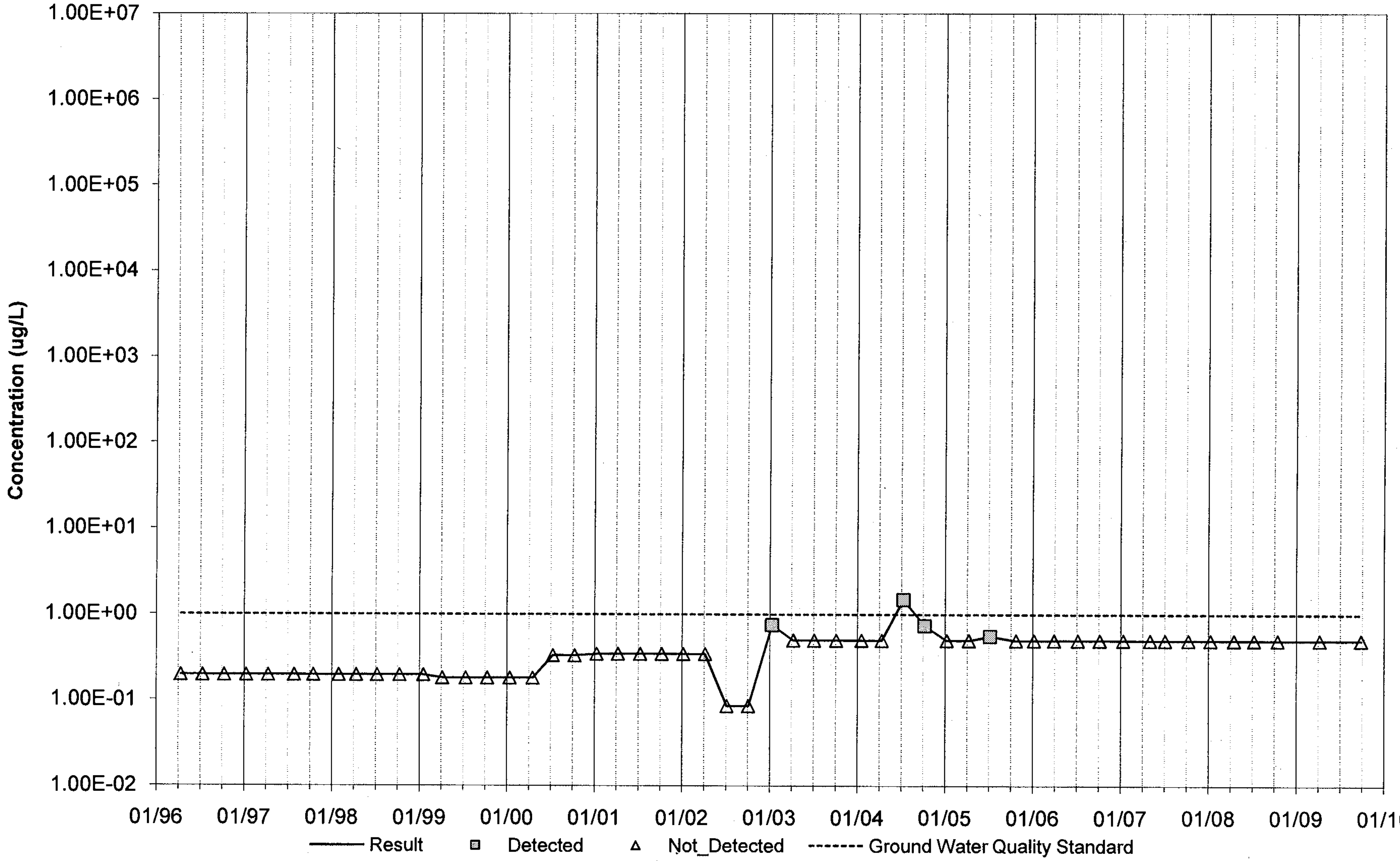
Monitoring Well: AAA
75-35-4 (1,1-Dichloroethylene)
Log Scale Concentrations



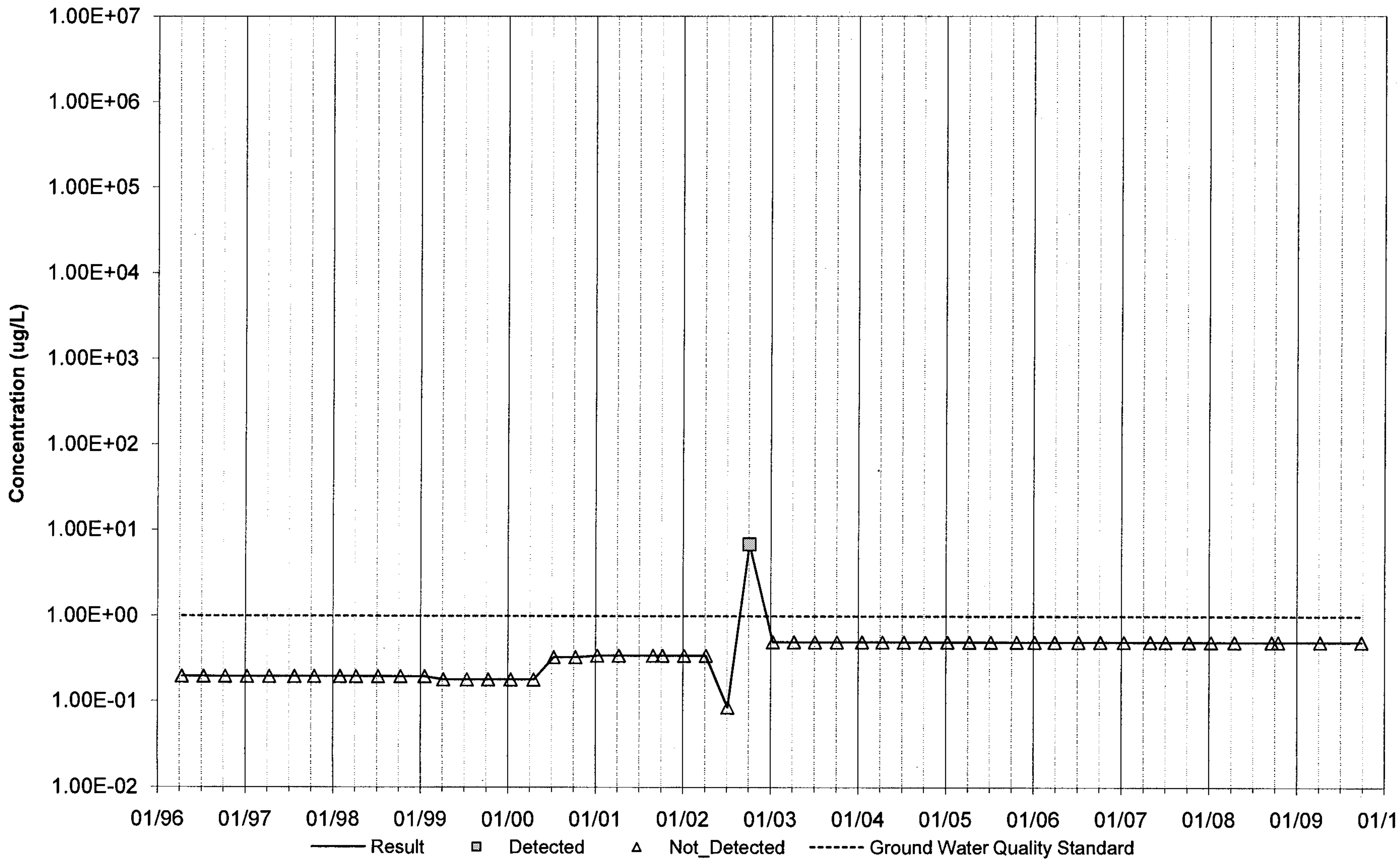
Monitoring Well: RCRA-D11
75-35-4 (1,1-Dichloroethylene)
Log Scale Concentrations

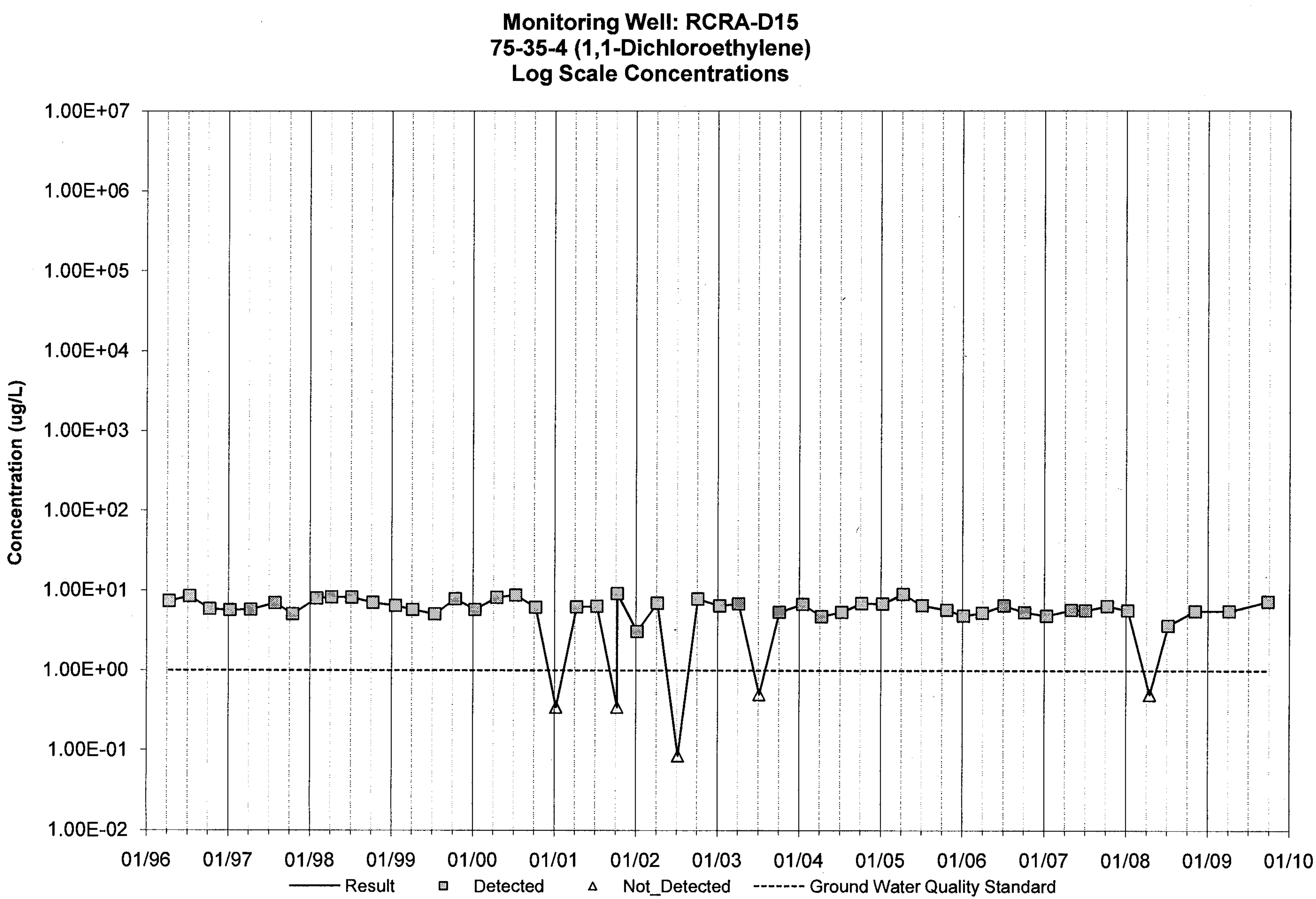


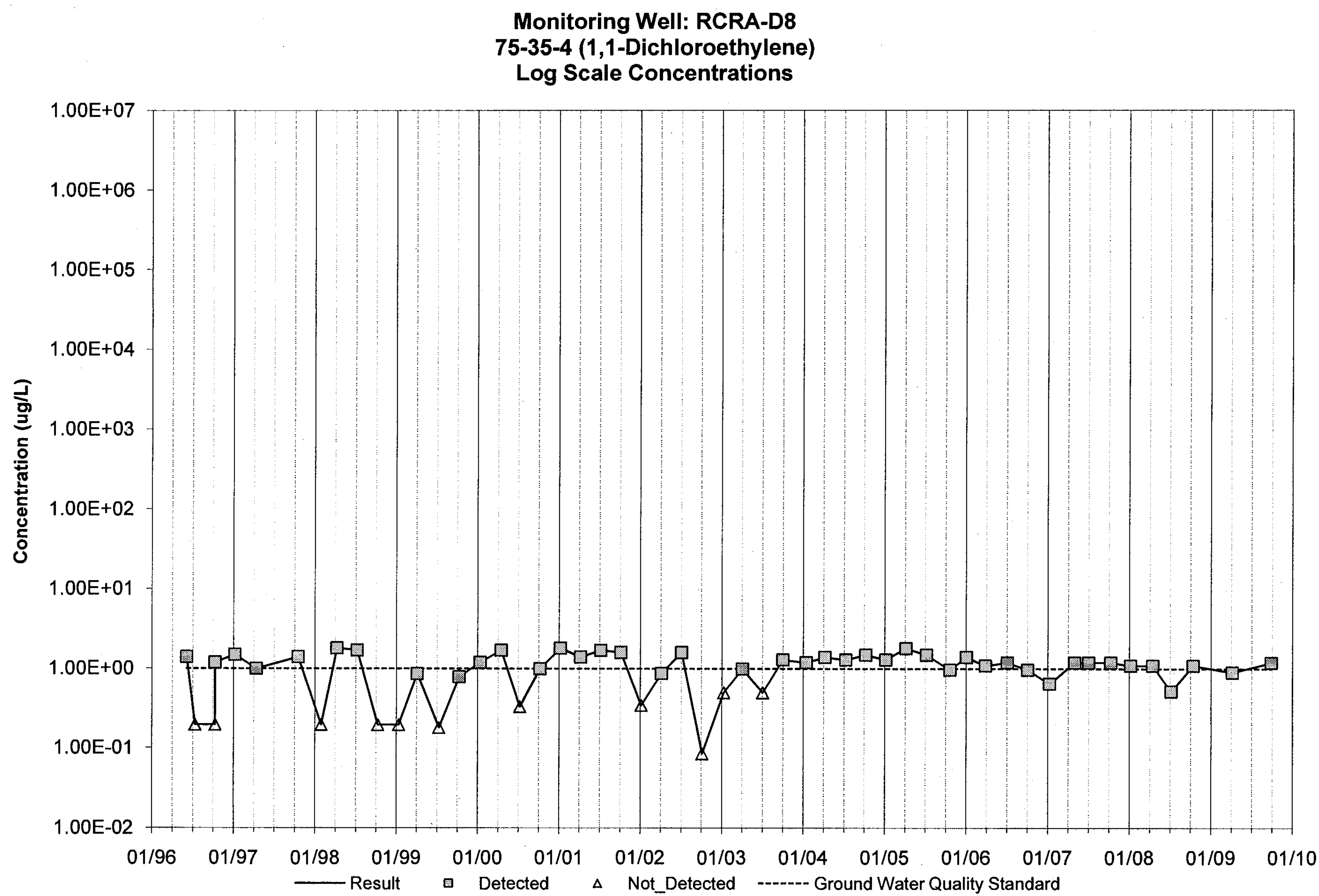
Monitoring Well: RCRA-D12
75-35-4 (1,1-Dichloroethylene)
Log Scale Concentrations



Monitoring Well: RCRA-D13
75-35-4 (1,1-Dichloroethylene)
Log Scale Concentrations

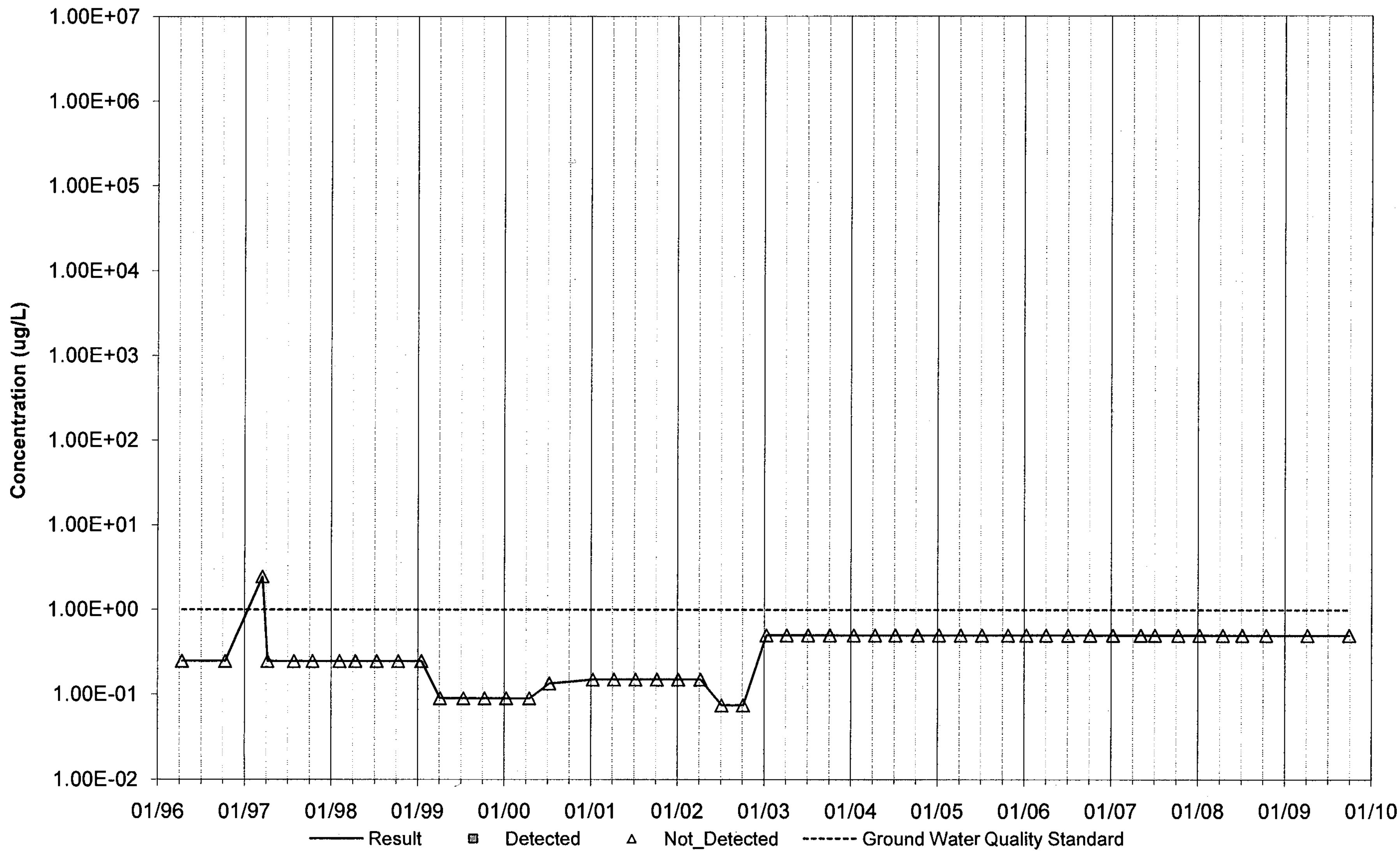



Monitoring Well: RCRA-D15
75-35-4 (1,1-Dichloroethylene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

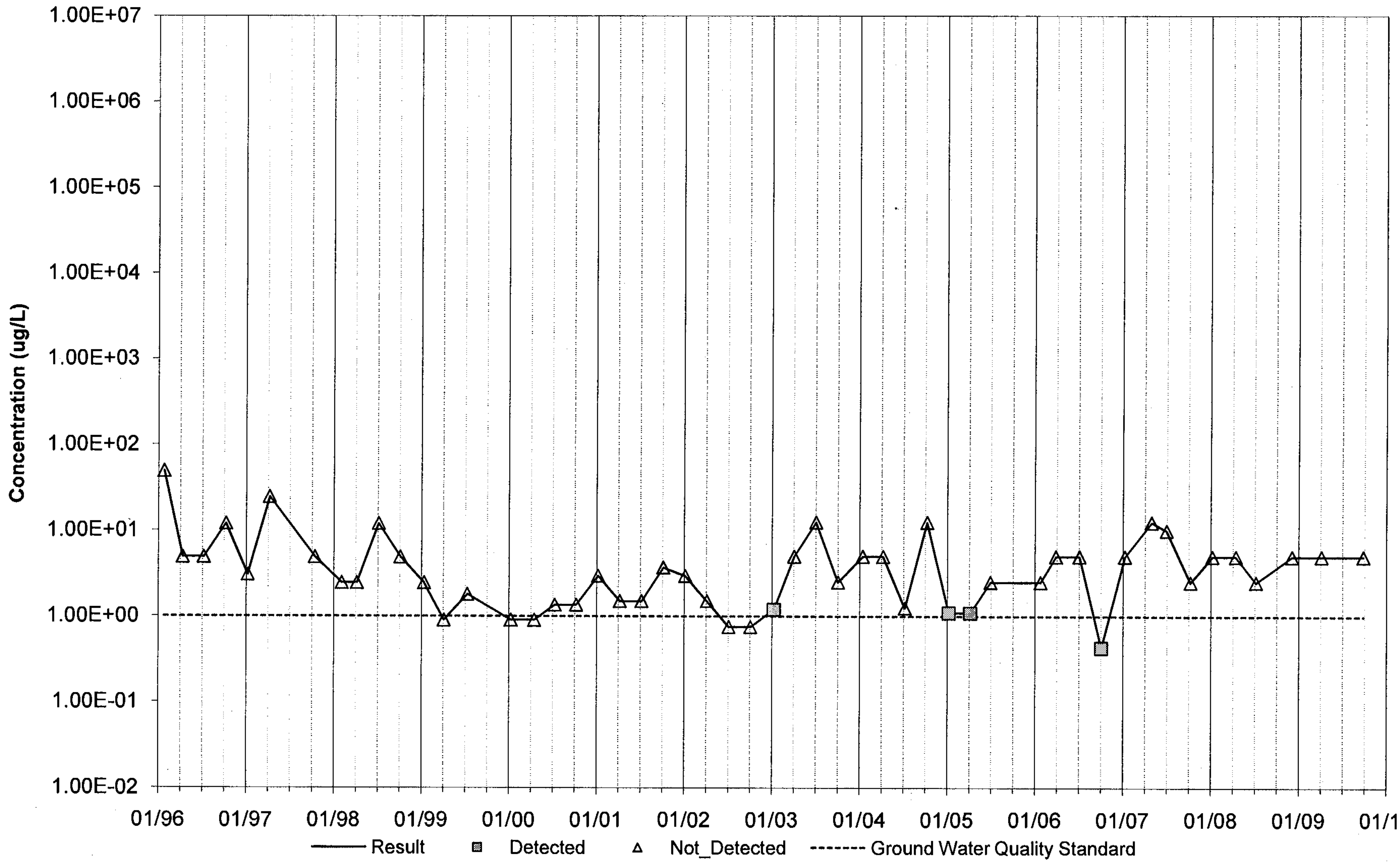


Monitoring Well: RCRA-D8
75-35-4 (1,1-Dichloroethylene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

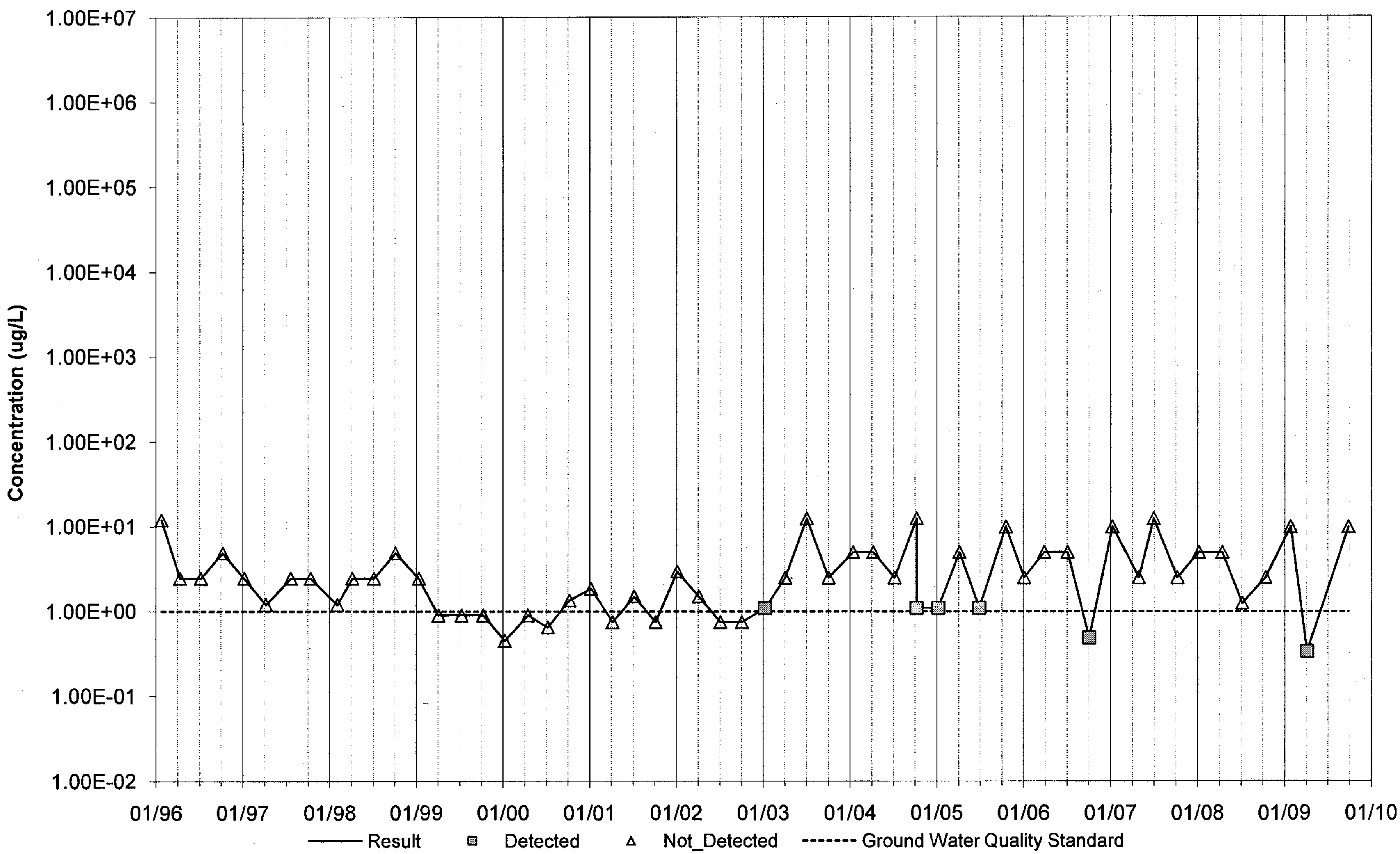
Monitoring Well: AAA
79-01-6 (Trichloroethene)
Log Scale Concentrations

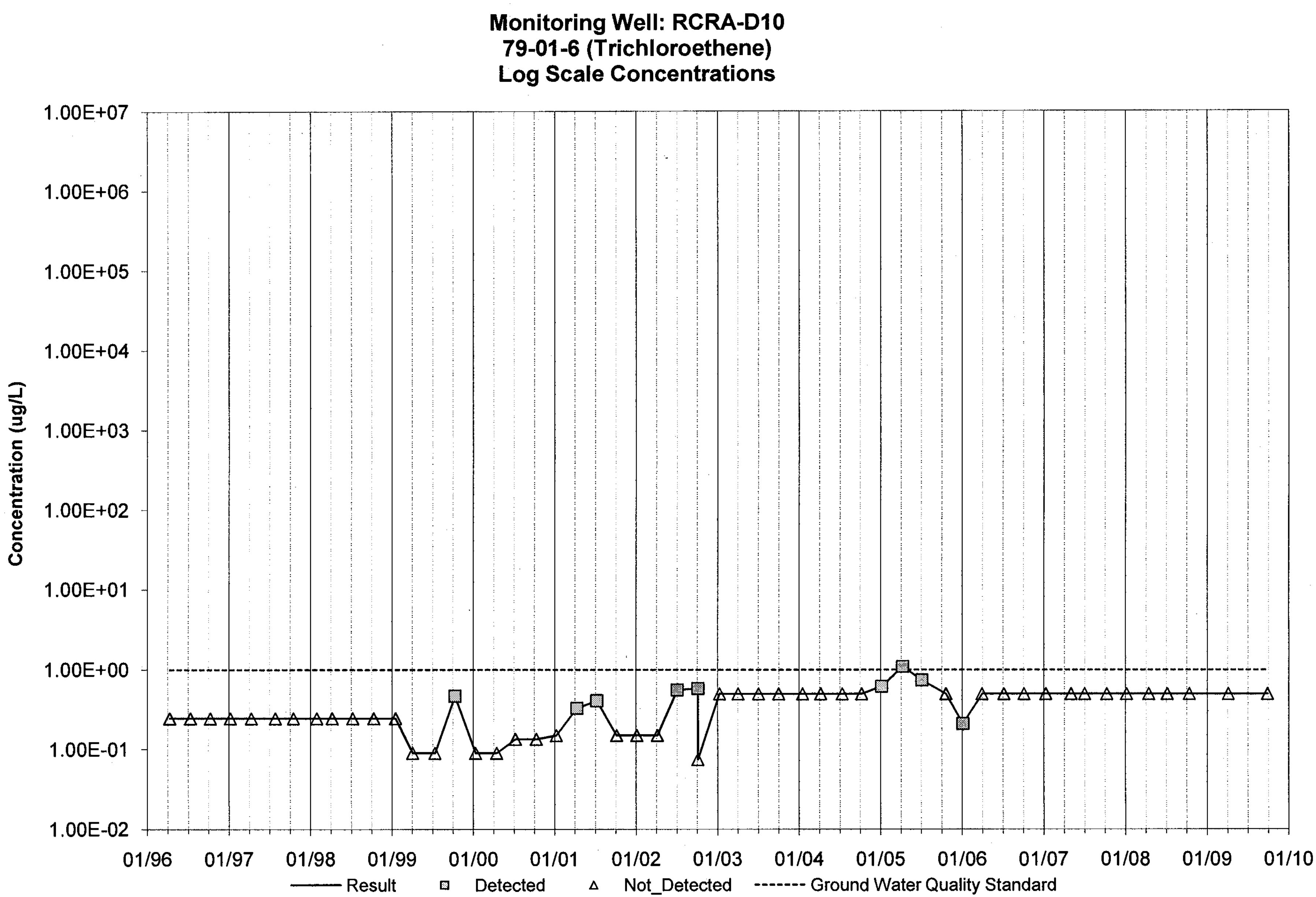


Monitoring Well: PW-2
79-01-6 (Trichloroethene)
Log Scale Concentrations

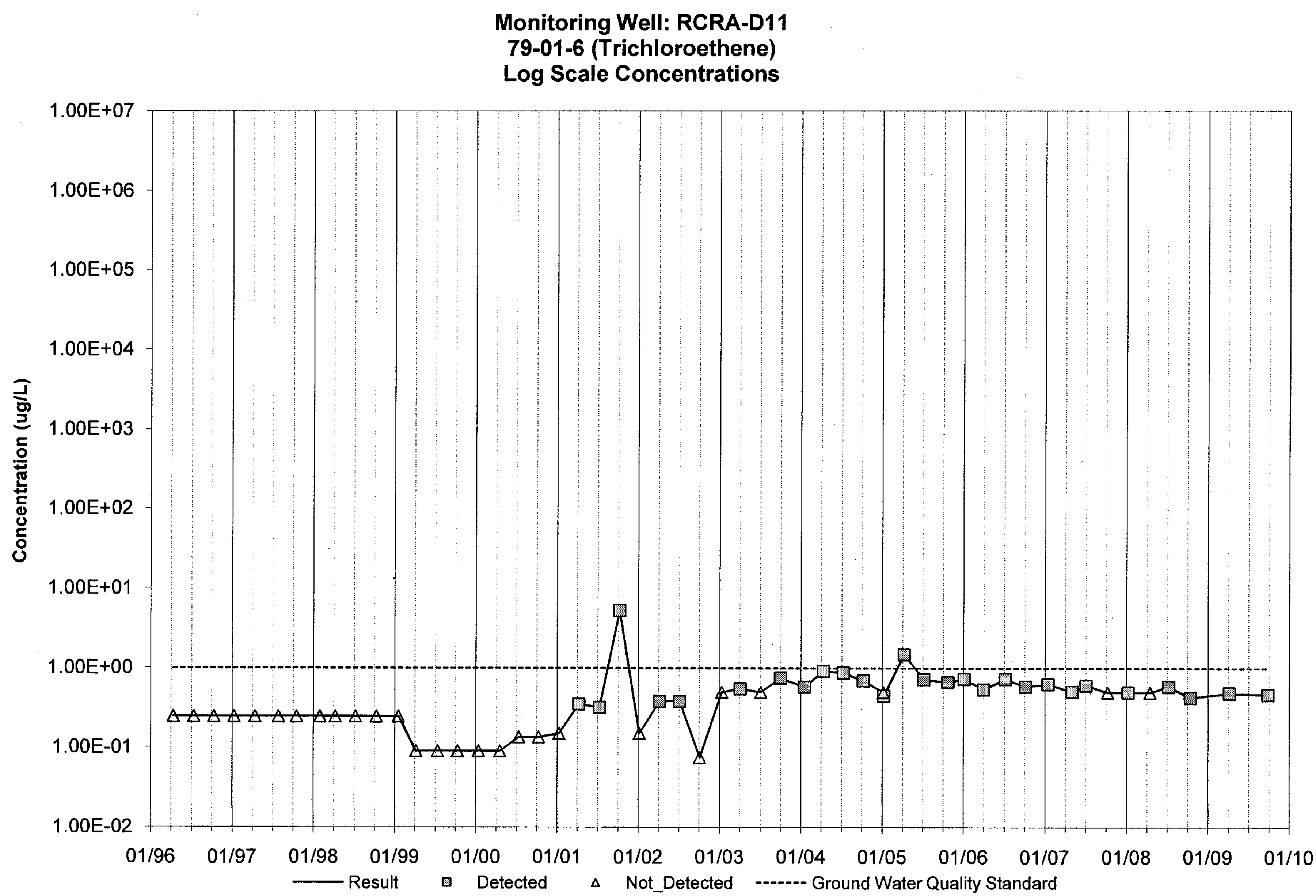


Monitoring Well: PW-3
79-01-6 (Trichloroethene)
Log Scale Concentrations

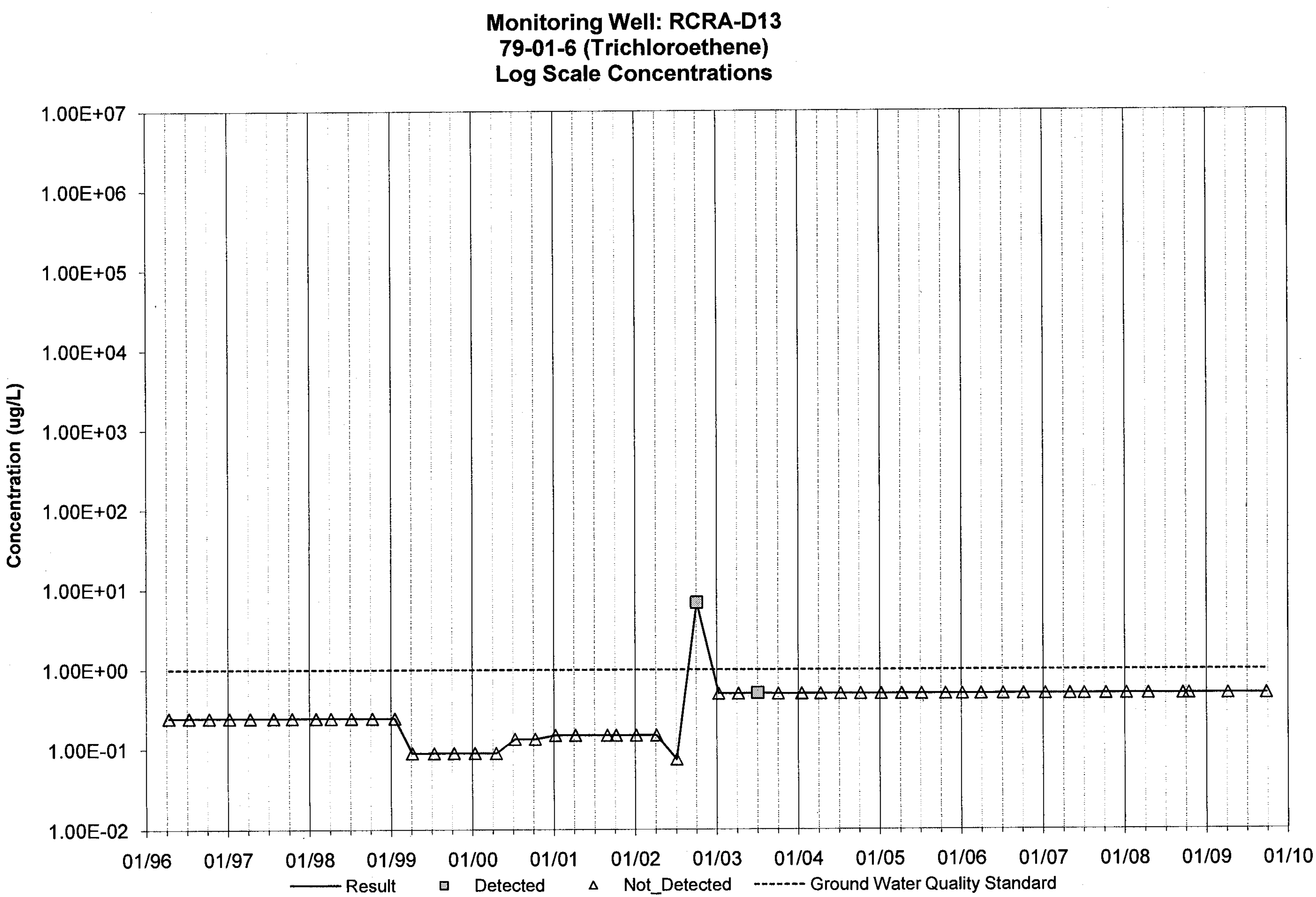




Monitoring Well: RCRA-D10
79-01-6 (Trichloroethene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

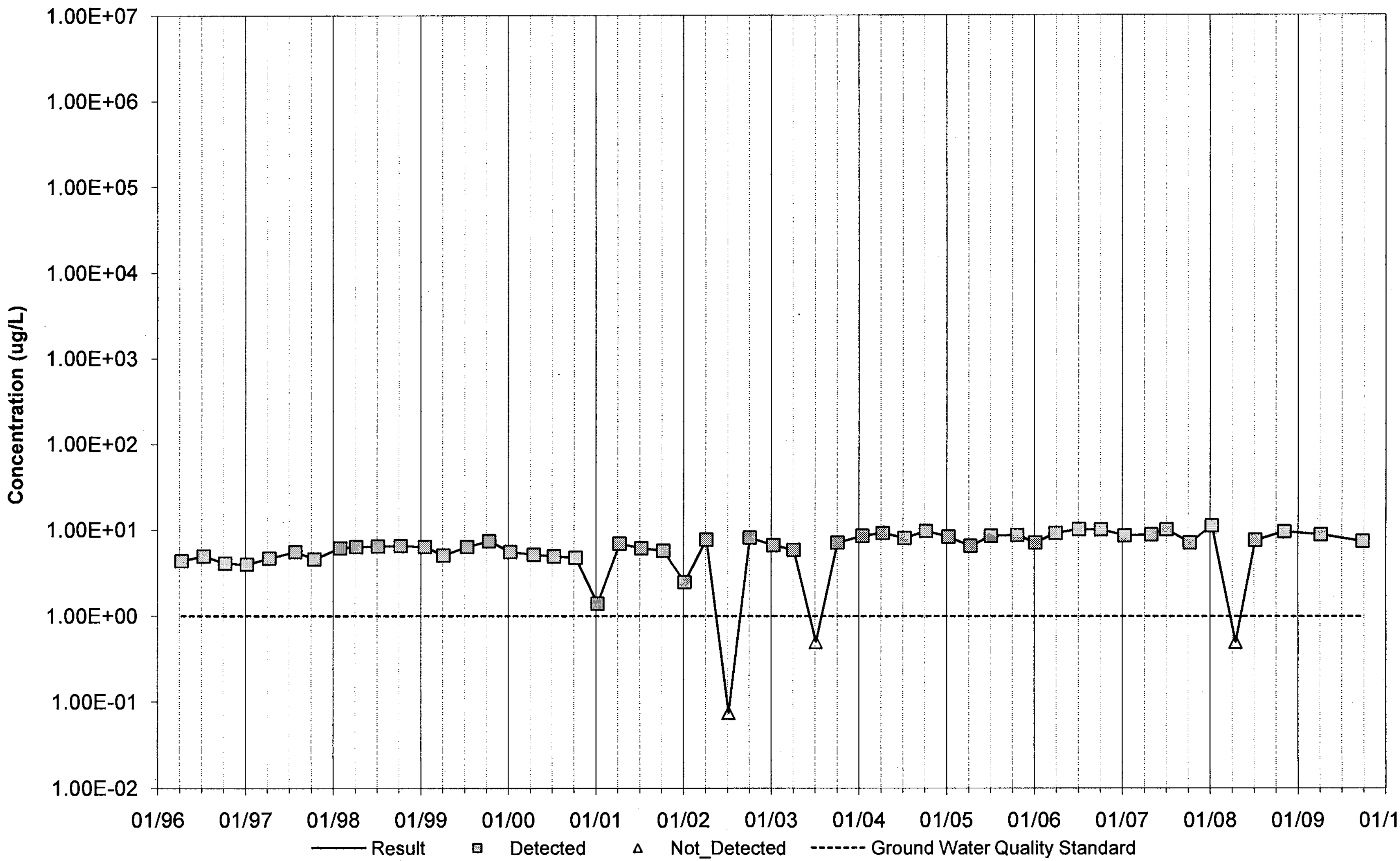


Monitoring Well: RCRA-D11
79-01-6 (Trichloroethene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

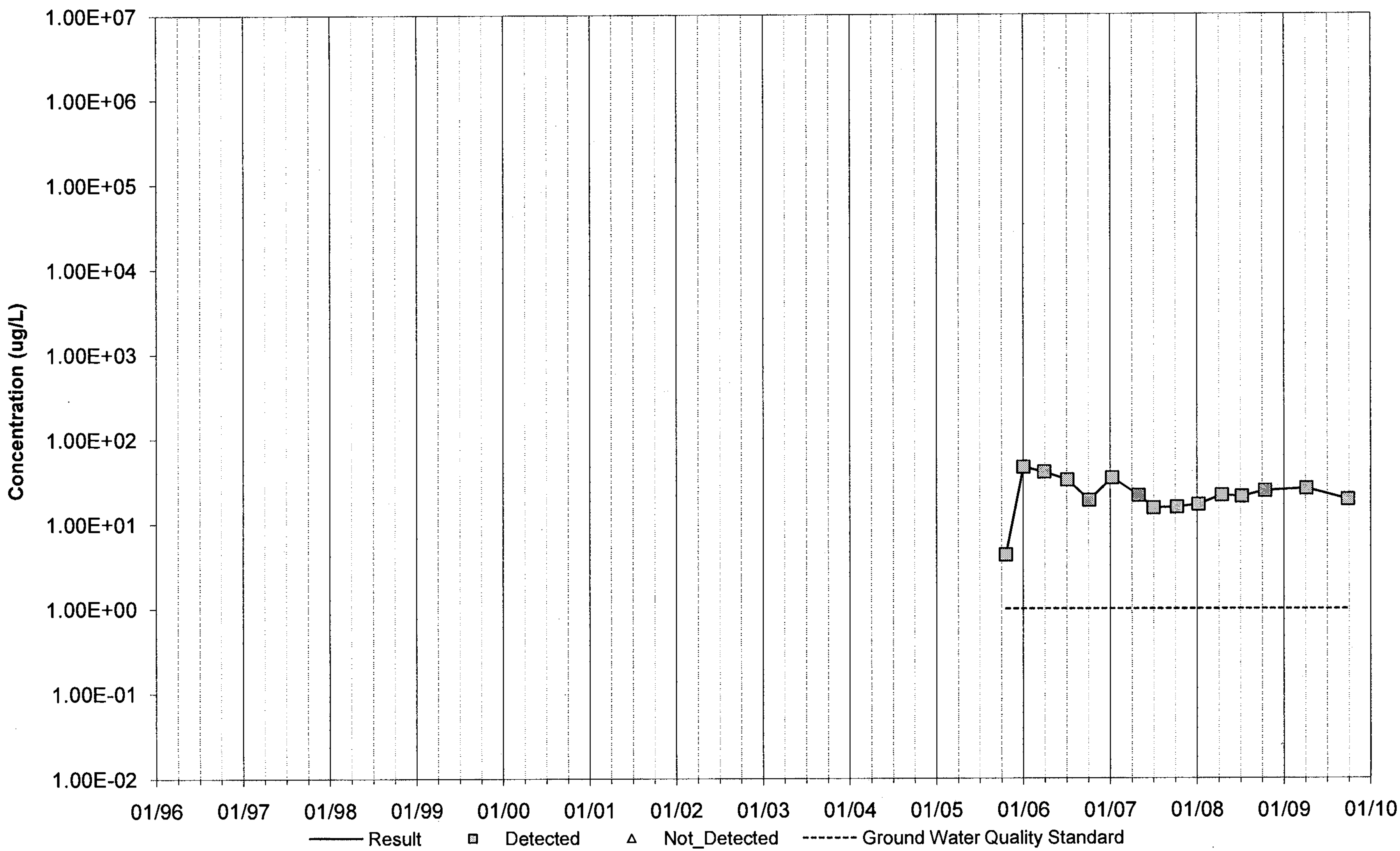


Monitoring Well: RCRA-D13
79-01-6 (Trichloroethene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

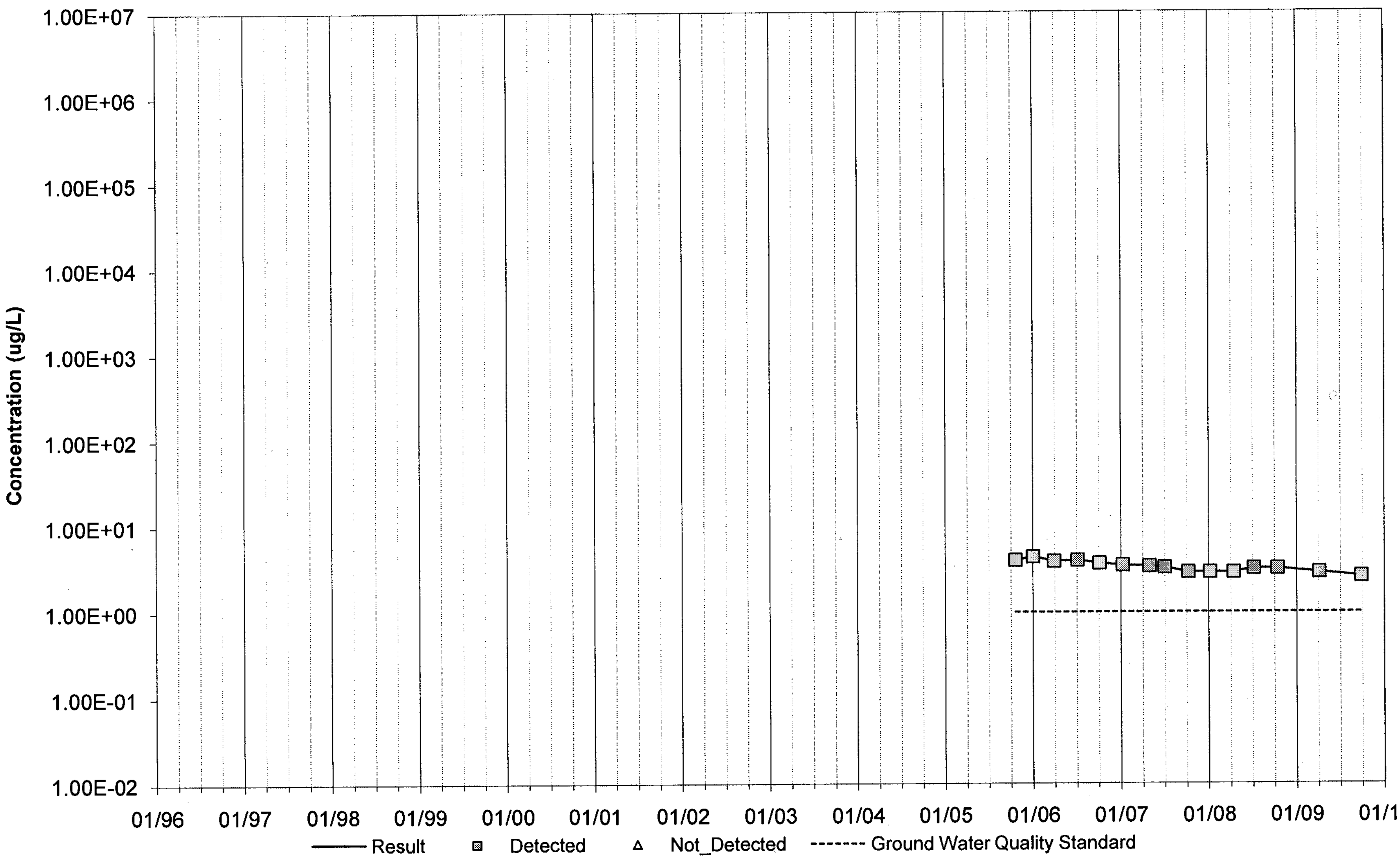
Monitoring Well: RCRA-D15
79-01-6 (Trichloroethene)
Log Scale Concentrations



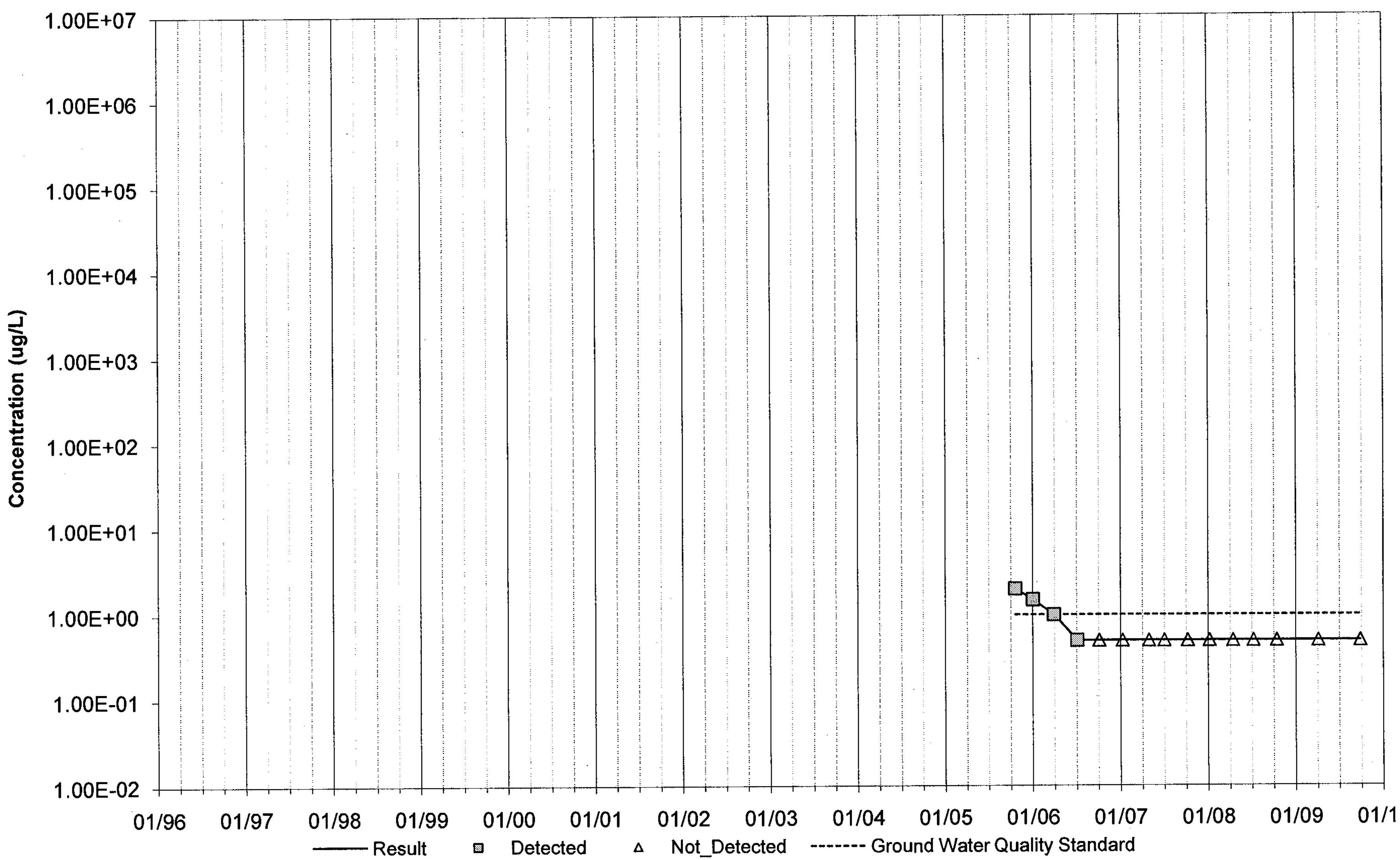
Monitoring Well: TT P1
79-01-6 (Trichloroethene)
Log Scale Concentrations



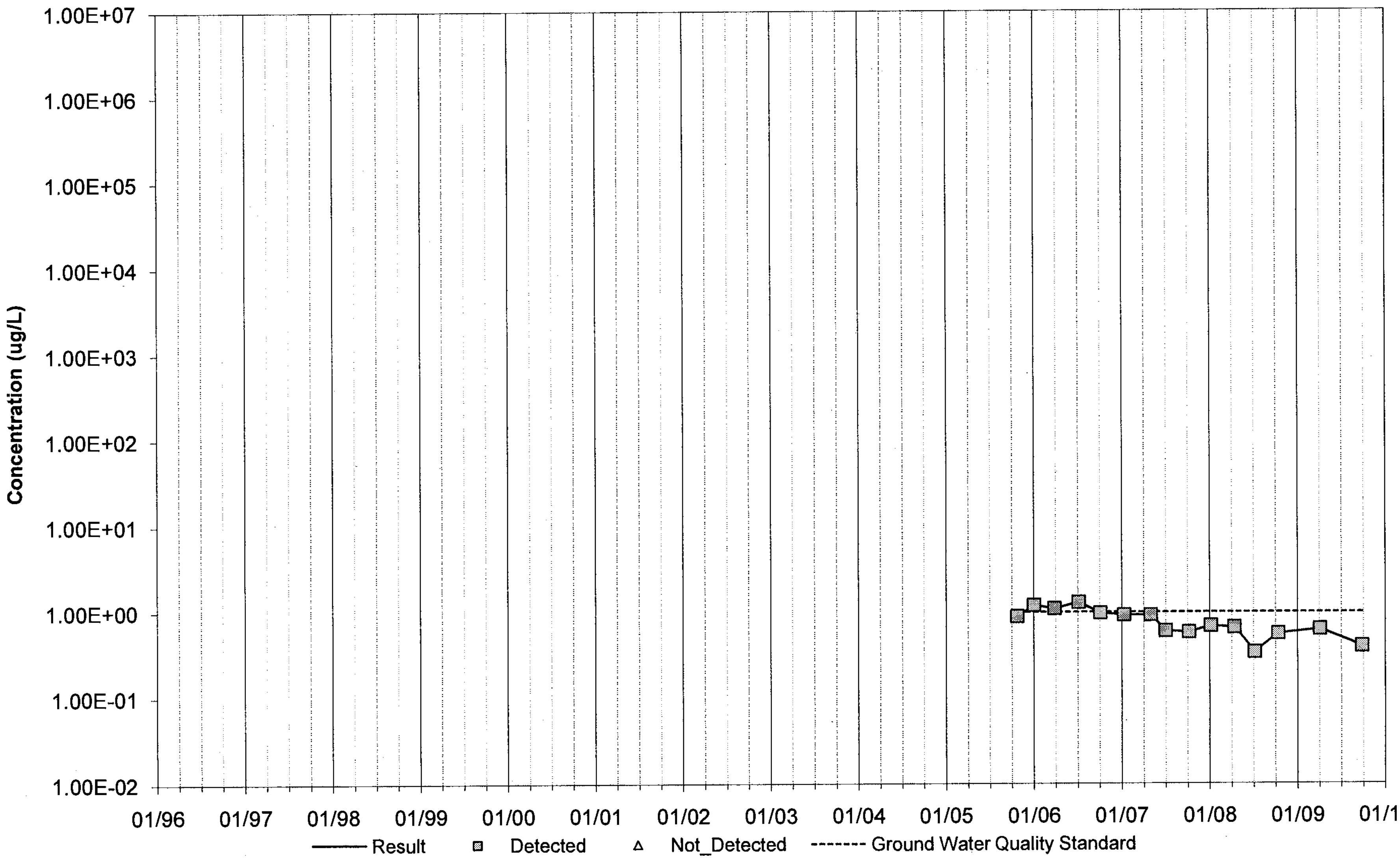
Monitoring Well: TT P2
79-01-6 (Trichloroethene)
Log Scale Concentrations



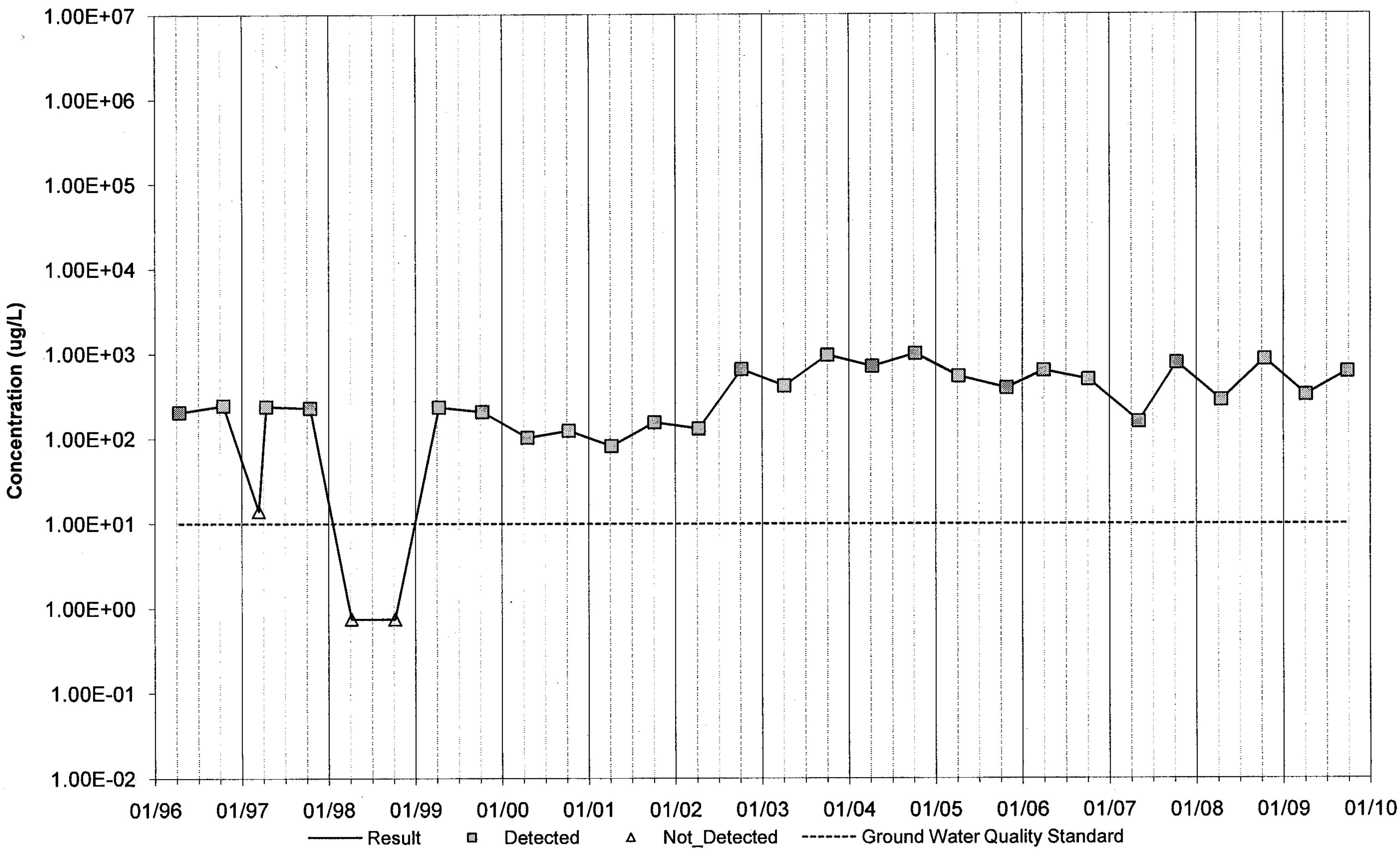
Monitoring Well: TT P3
79-01-6 (Trichloroethene)
Log Scale Concentrations



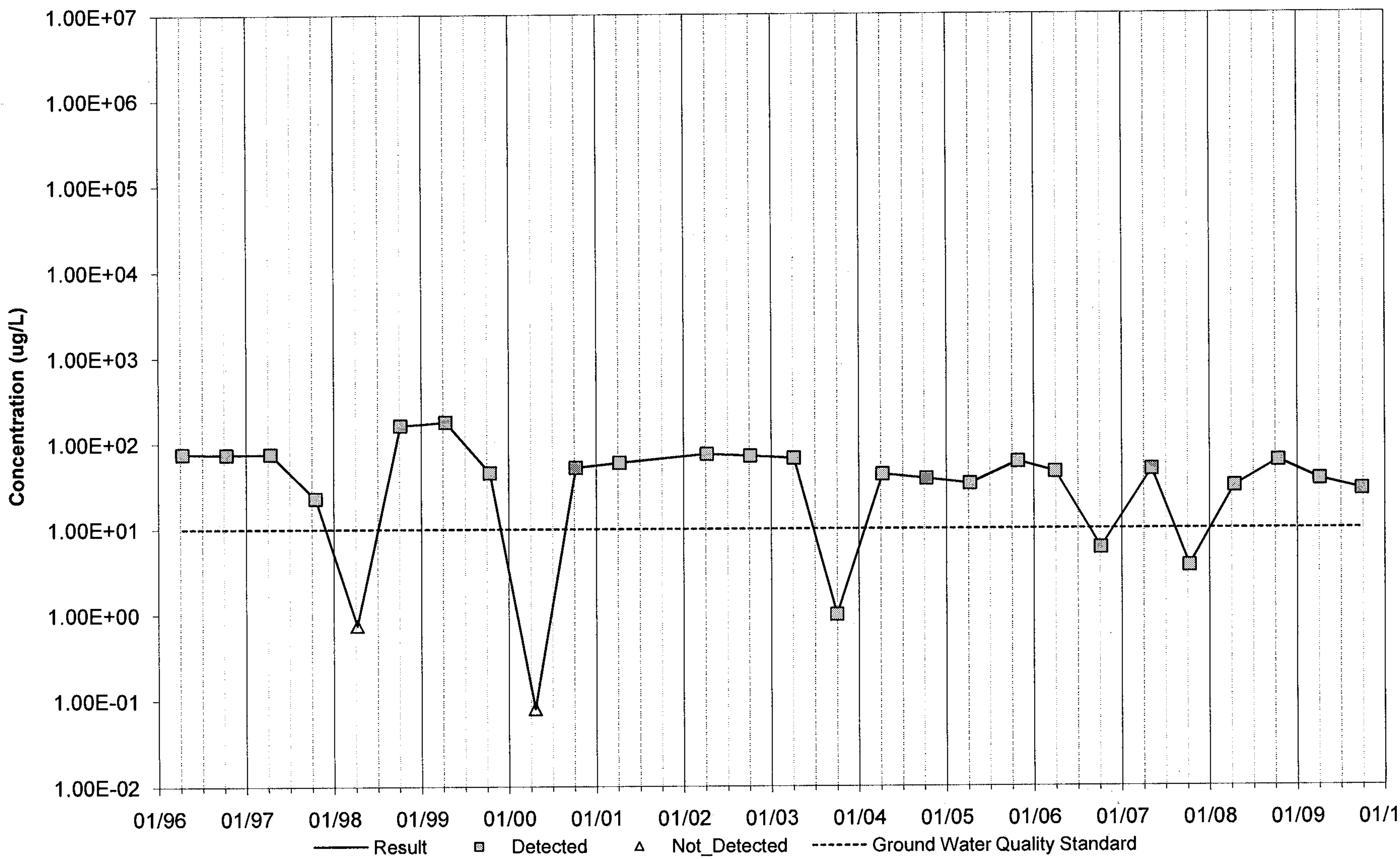
Monitoring Well: YY P2
79-01-6 (Trichloroethene)
Log Scale Concentrations



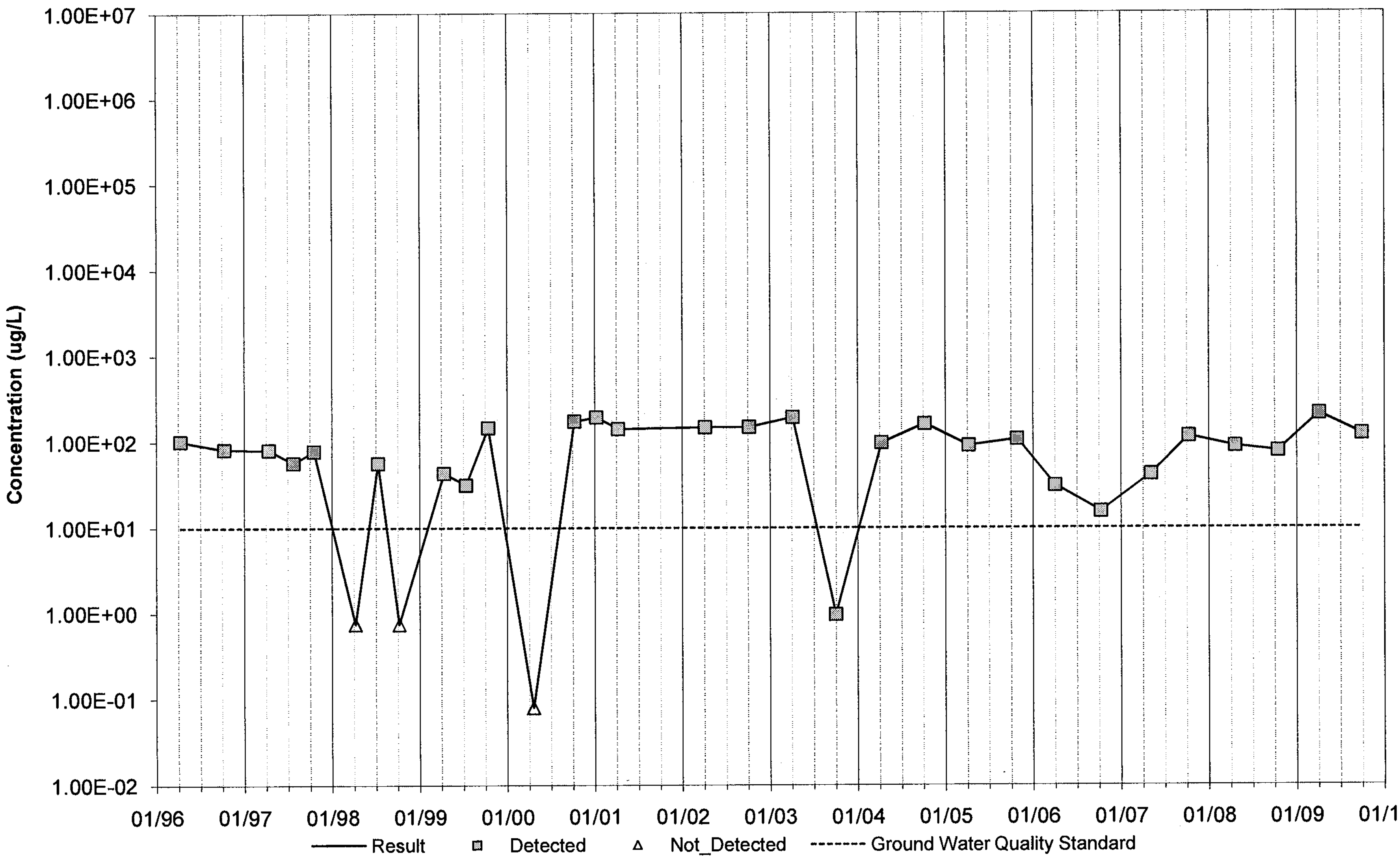
Monitoring Well: 19R
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations

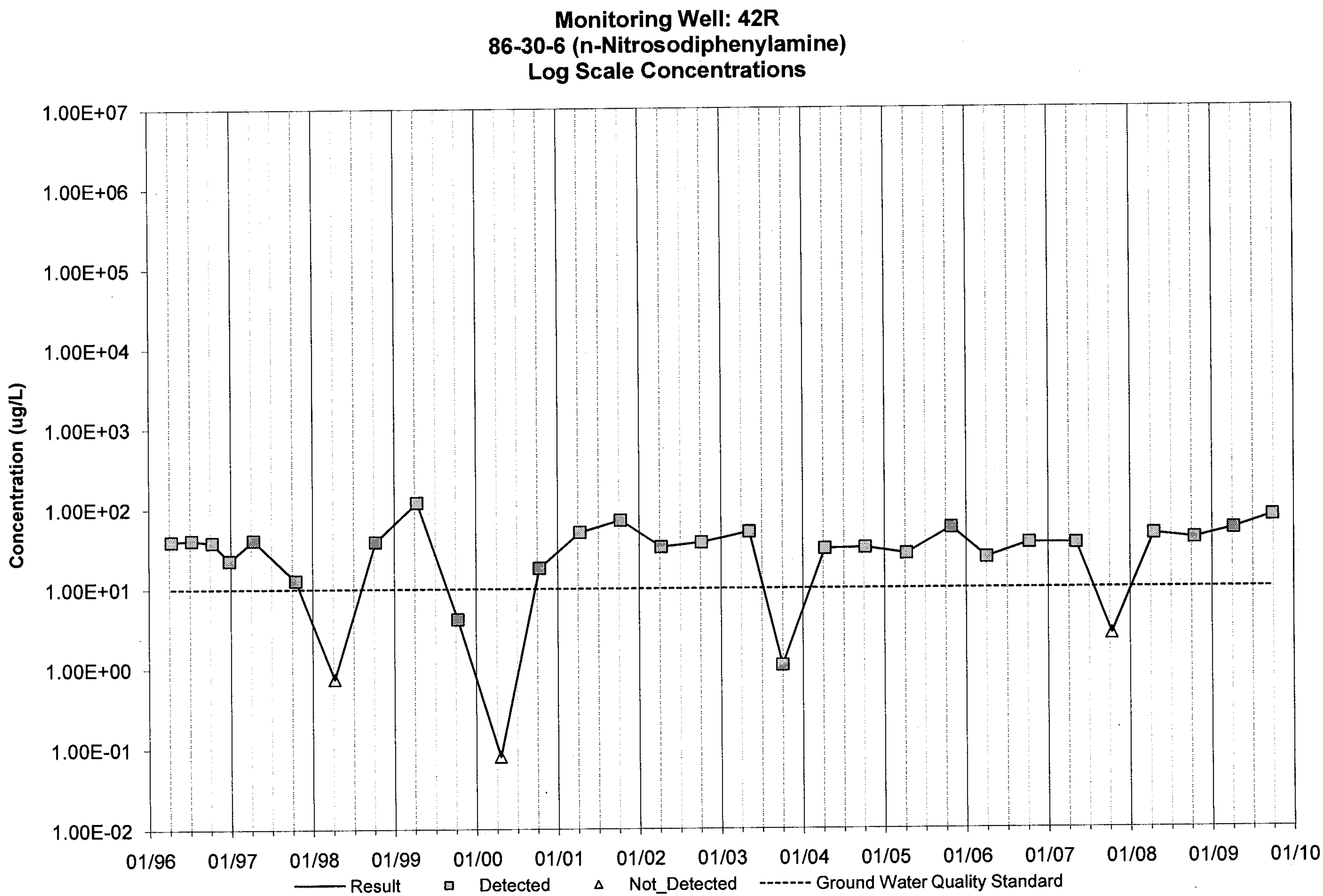


Monitoring Well: 34R
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations



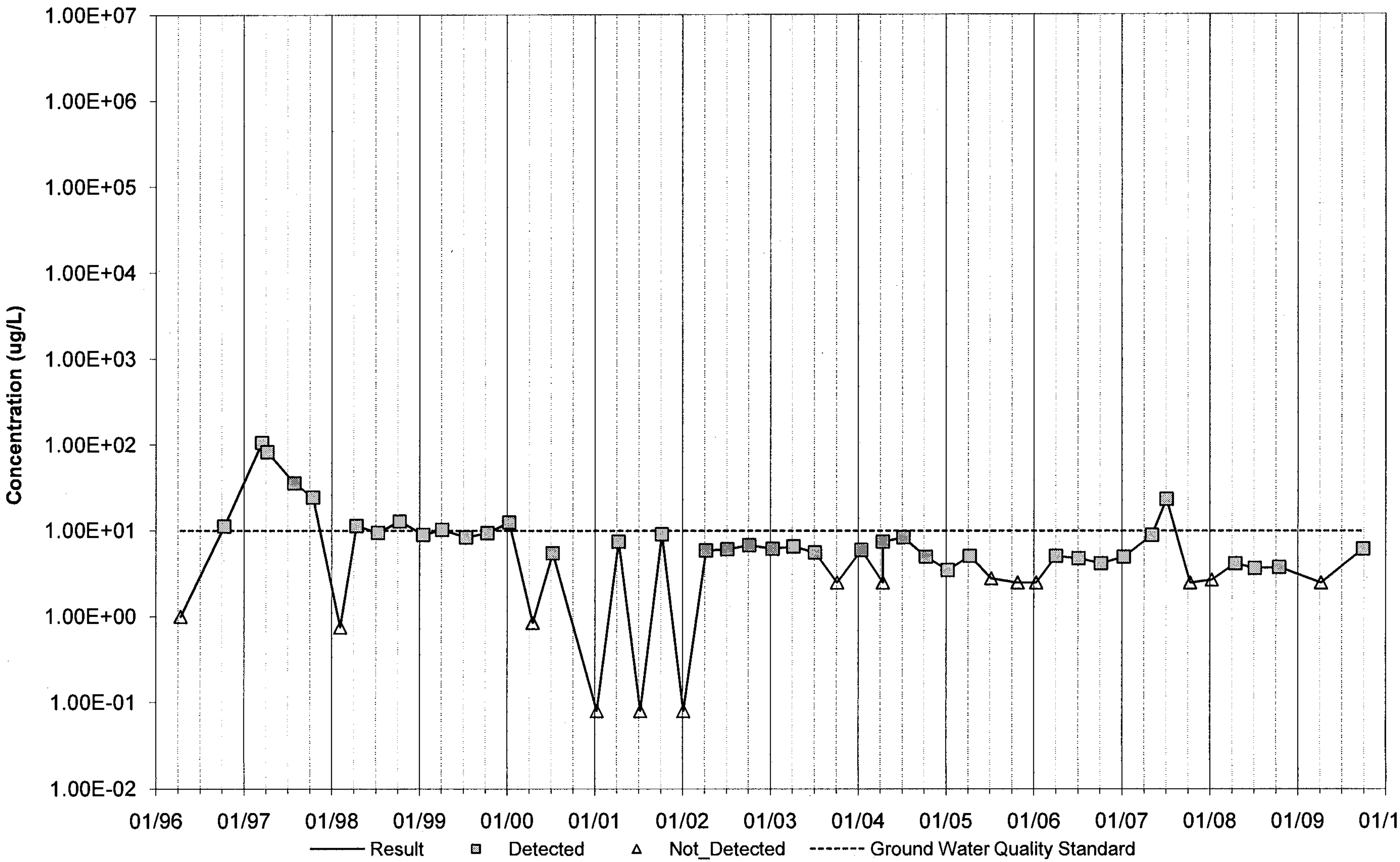
Monitoring Well: 38R
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations



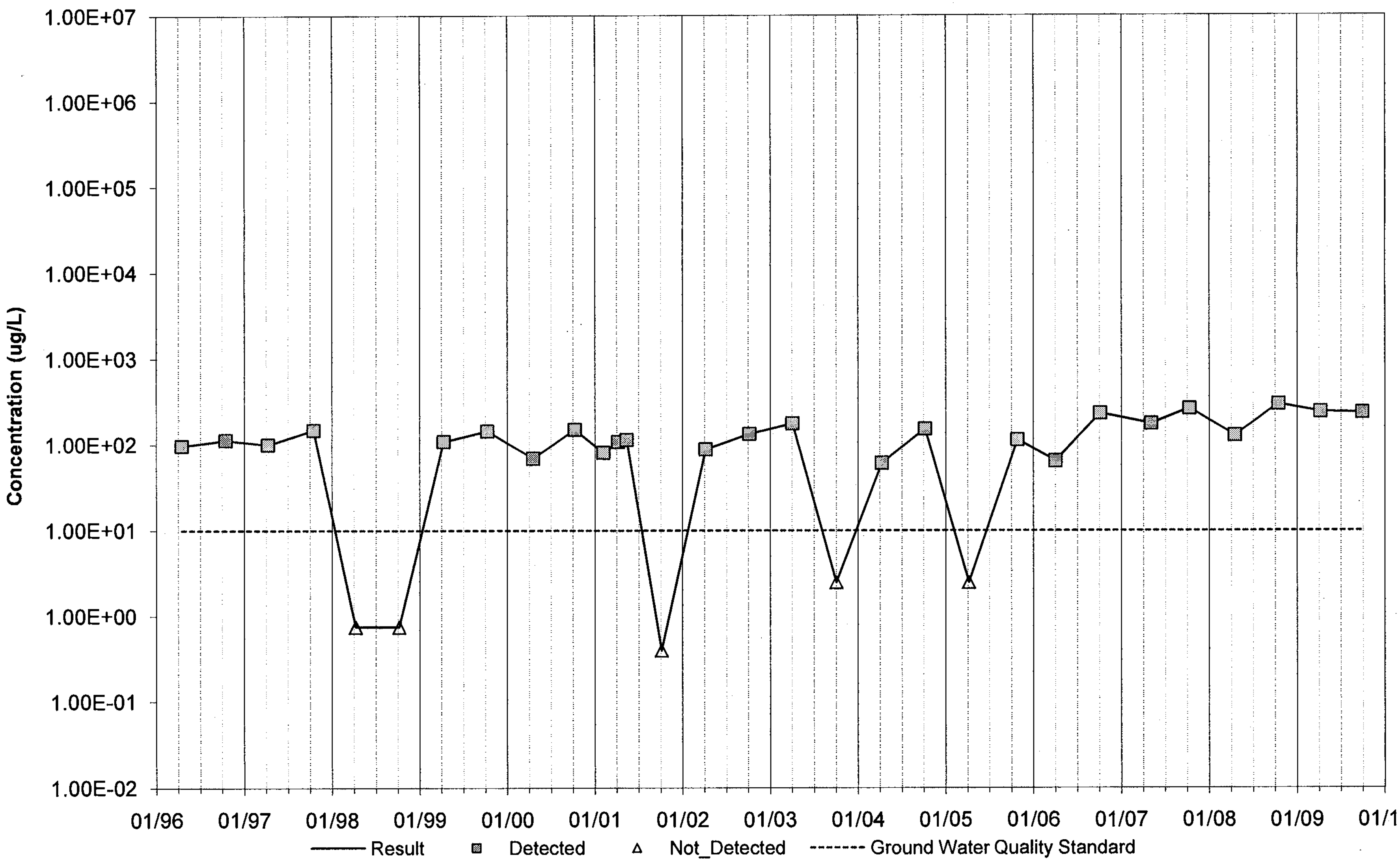


Monitoring Well: 42R
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

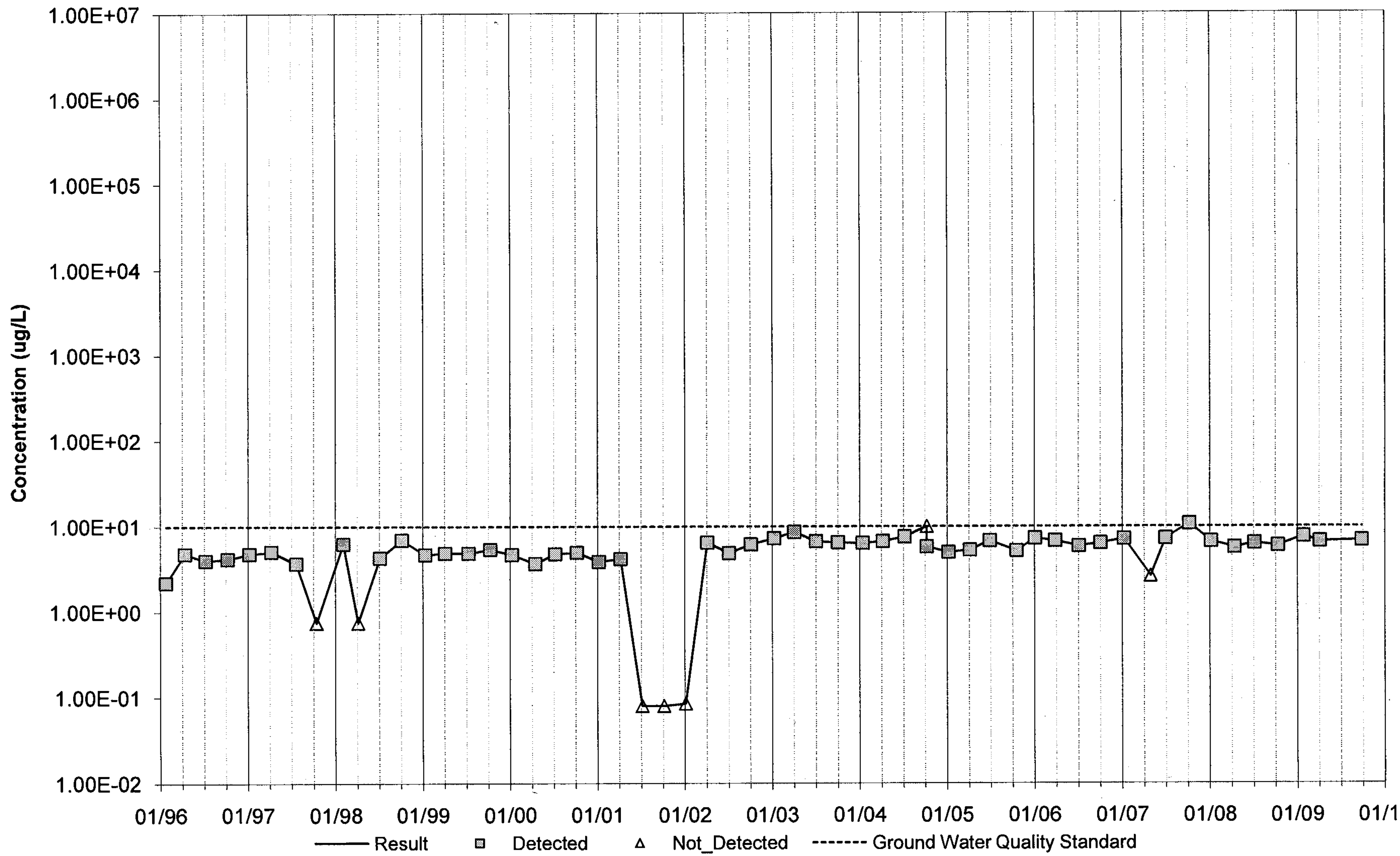
Monitoring Well: AAA
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations



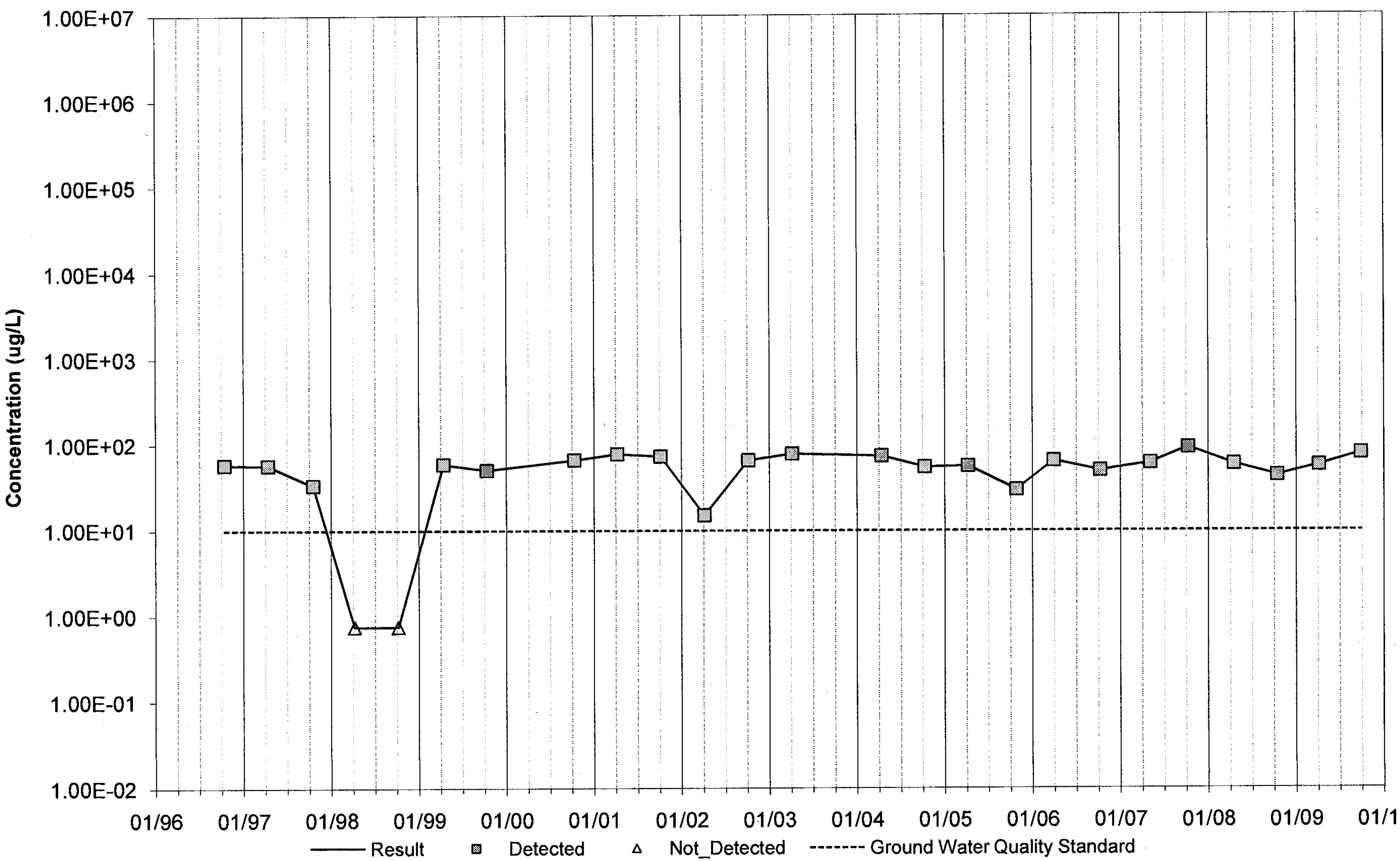
Monitoring Well: MW-2
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations



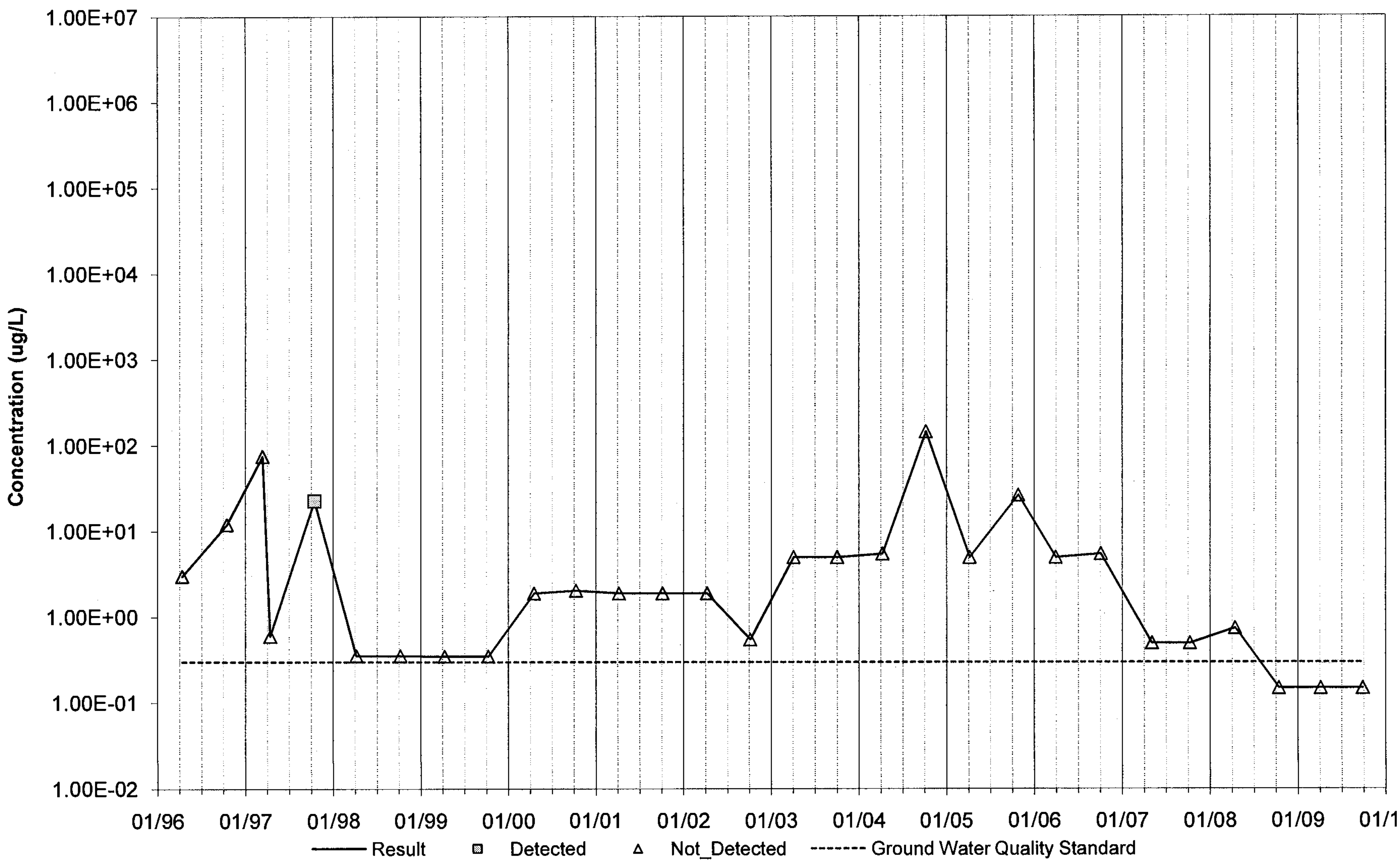
Monitoring Well: PW-3
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations

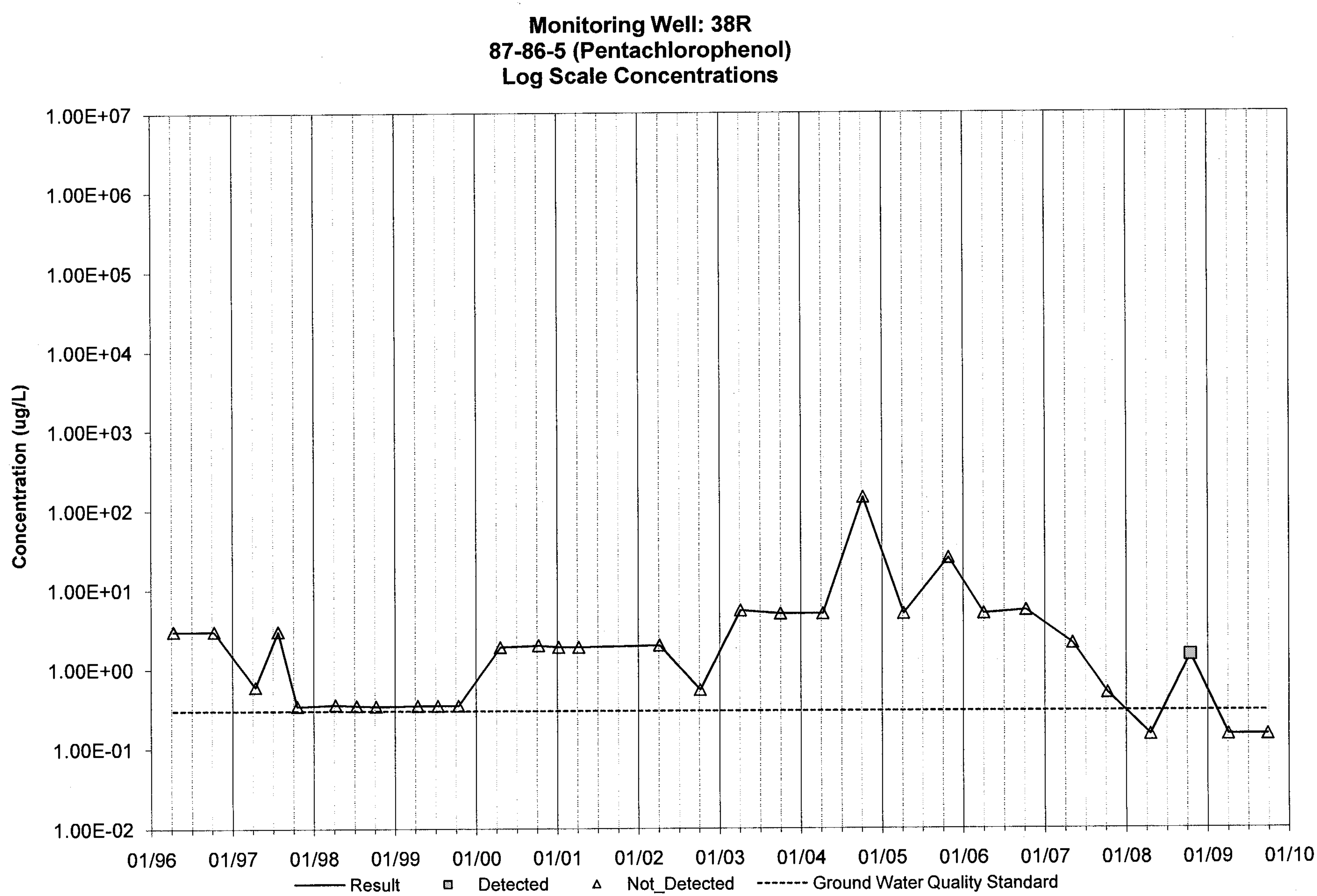


Monitoring Well: TFP-94-1R
86-30-6 (n-Nitrosodiphenylamine)
Log Scale Concentrations

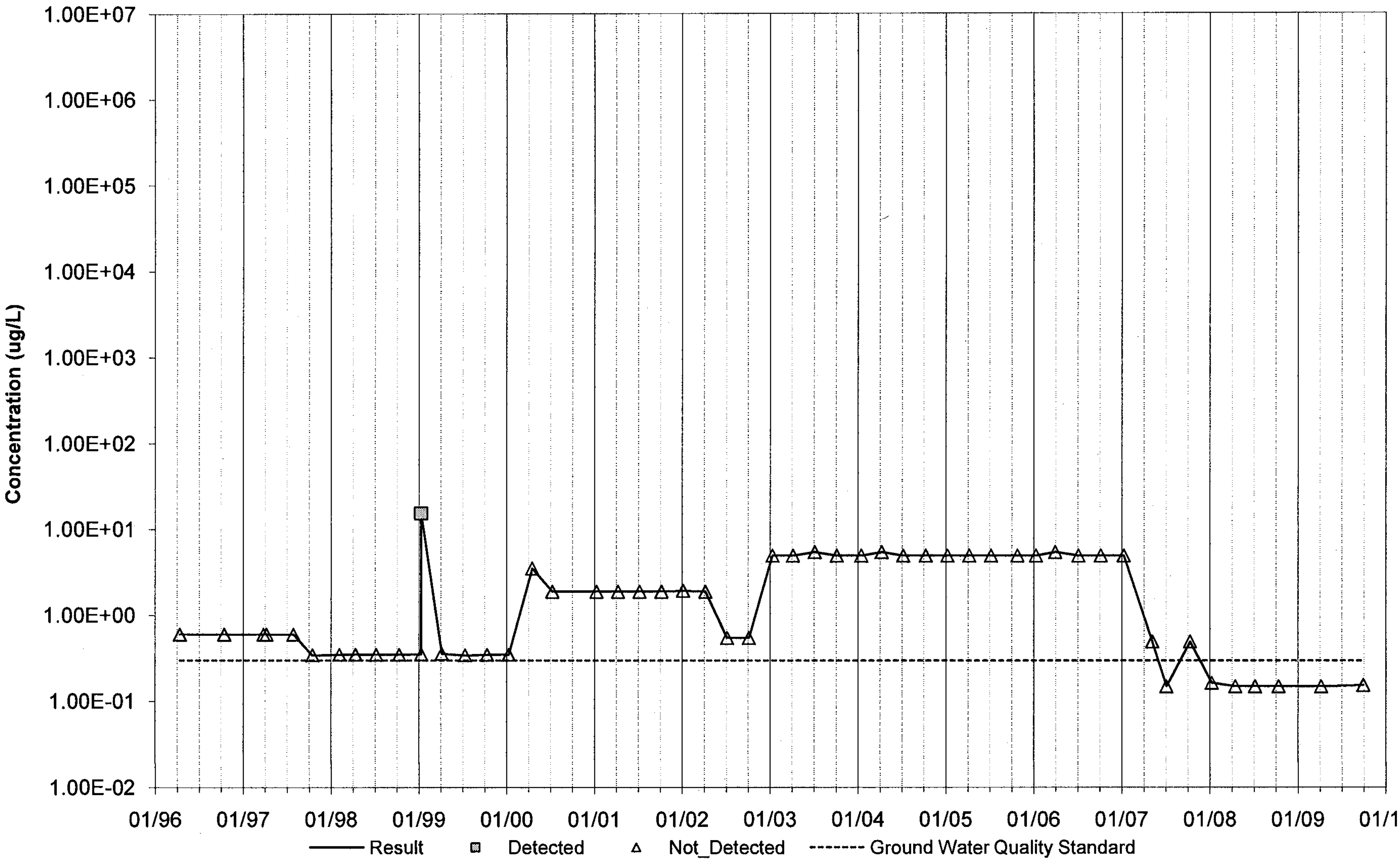


Monitoring Well: 19R
87-86-5 (Pentachlorophenol)
Log Scale Concentrations

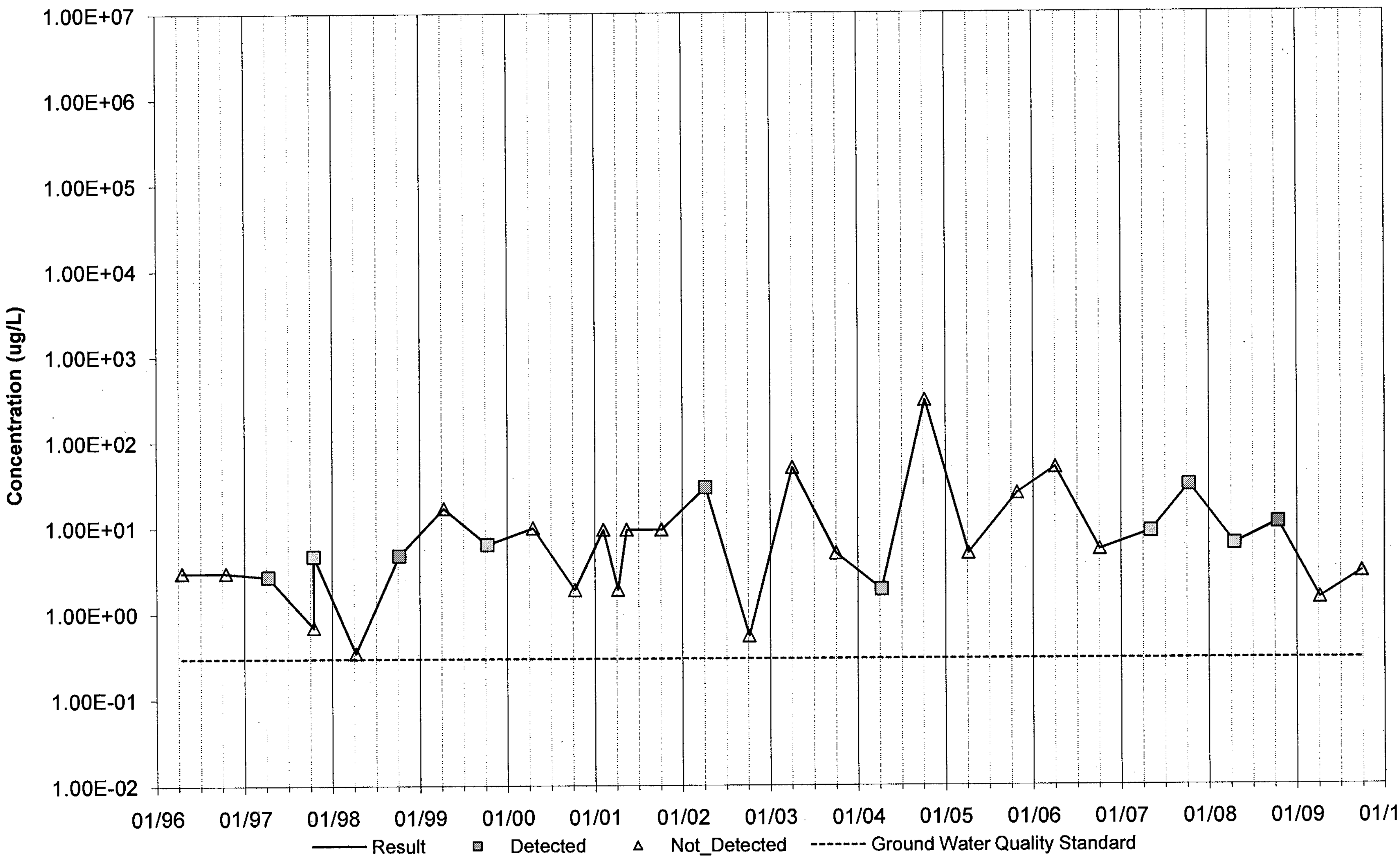


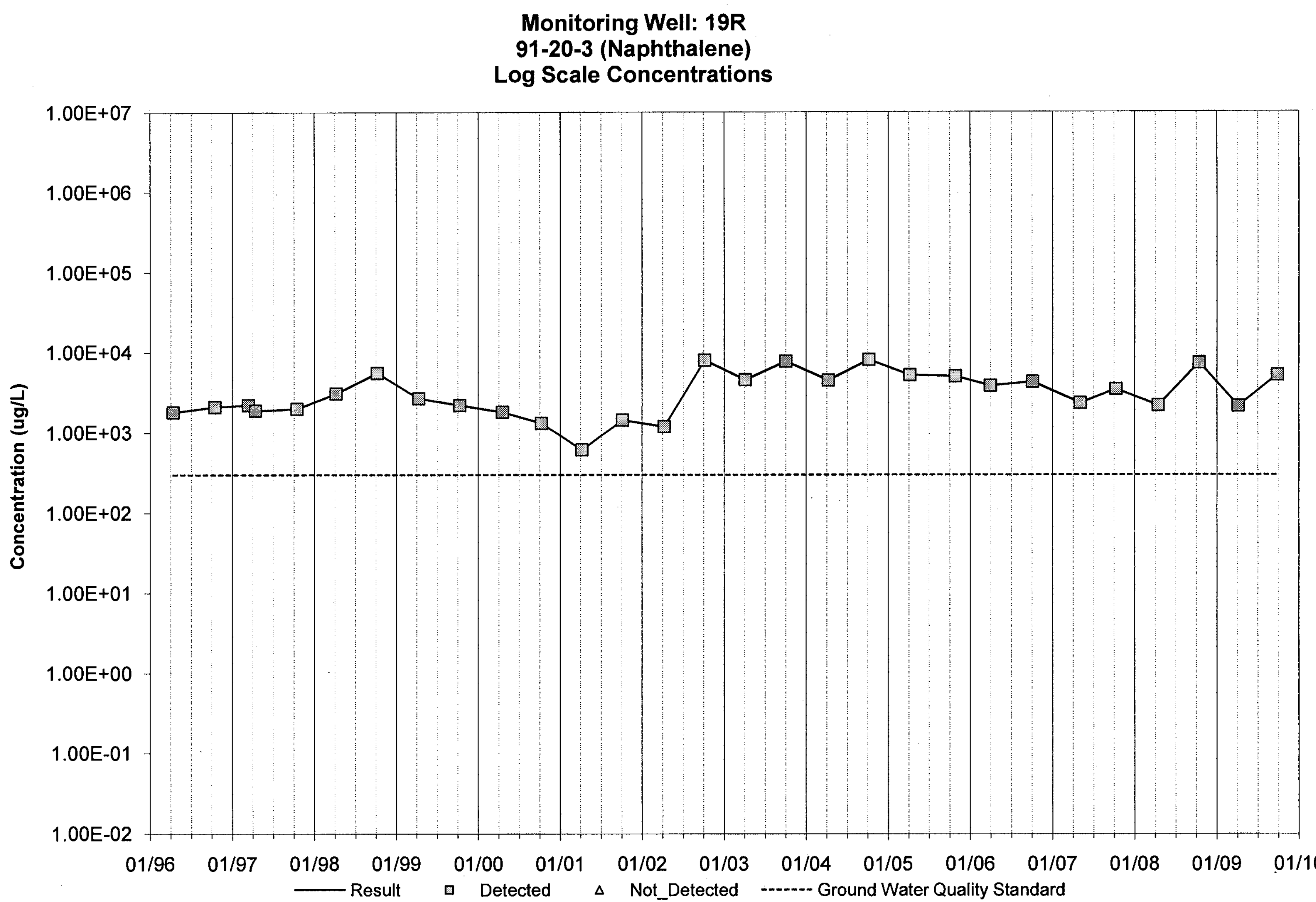

Monitoring Well: 38R
87-86-5 (Pentachlorophenol)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

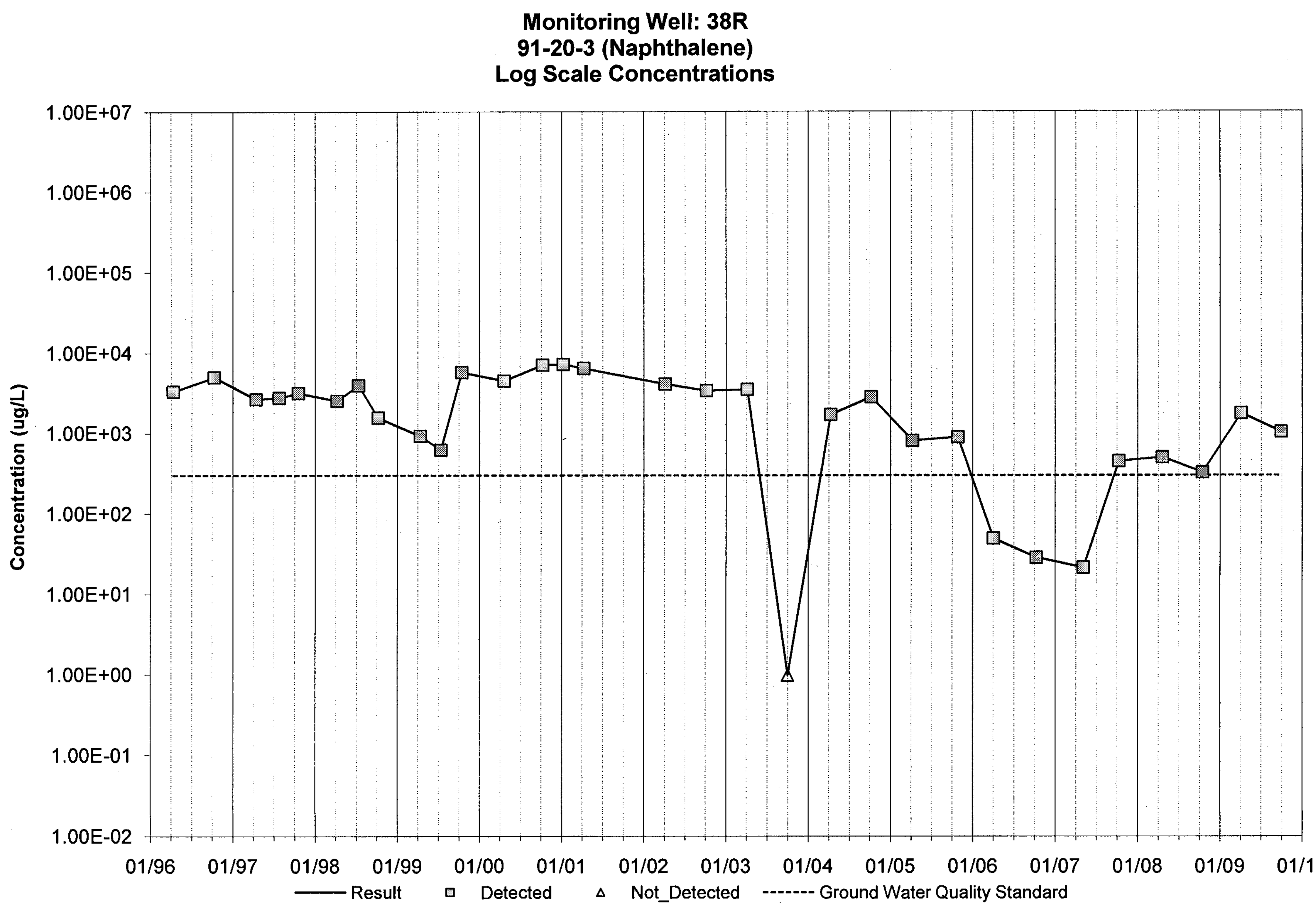
Monitoring Well: EEE-R
87-86-5 (Pentachlorophenol)
Log Scale Concentrations



Monitoring Well: MW-2
87-86-5 (Pentachlorophenol)
Log Scale Concentrations

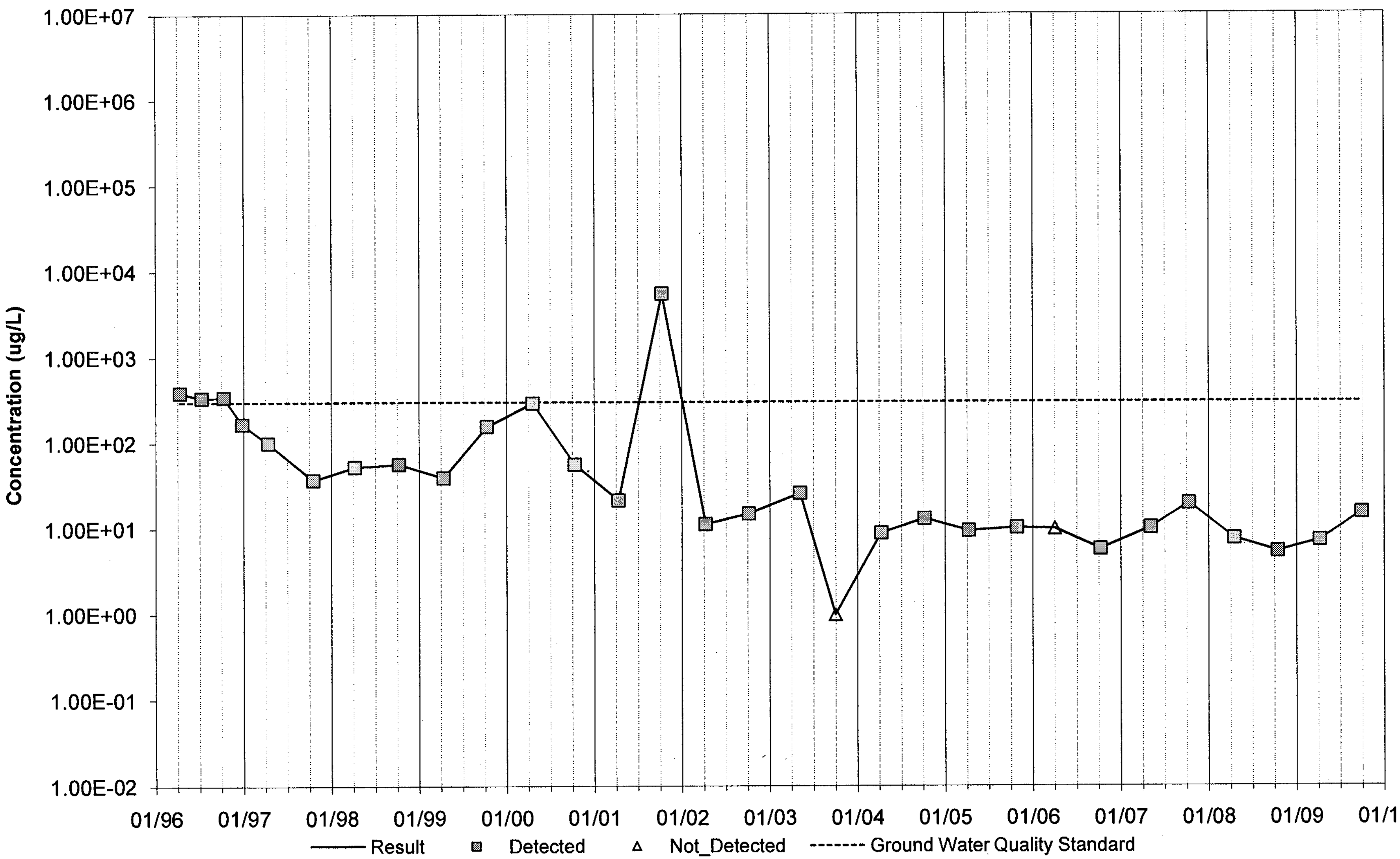



Monitoring Well: 19R
91-20-3 (Naphthalene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

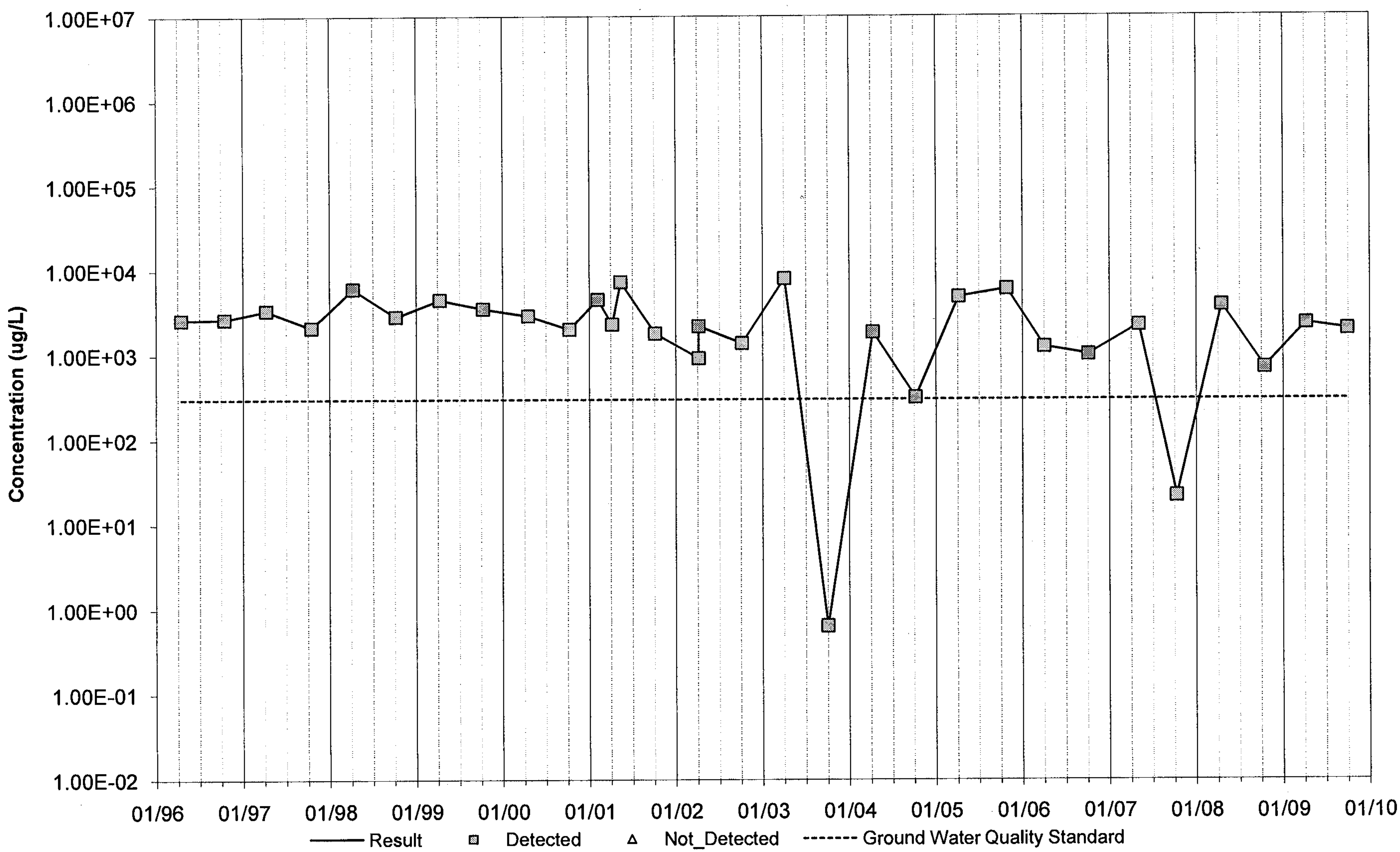


Monitoring Well: 38R
91-20-3 (Naphthalene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

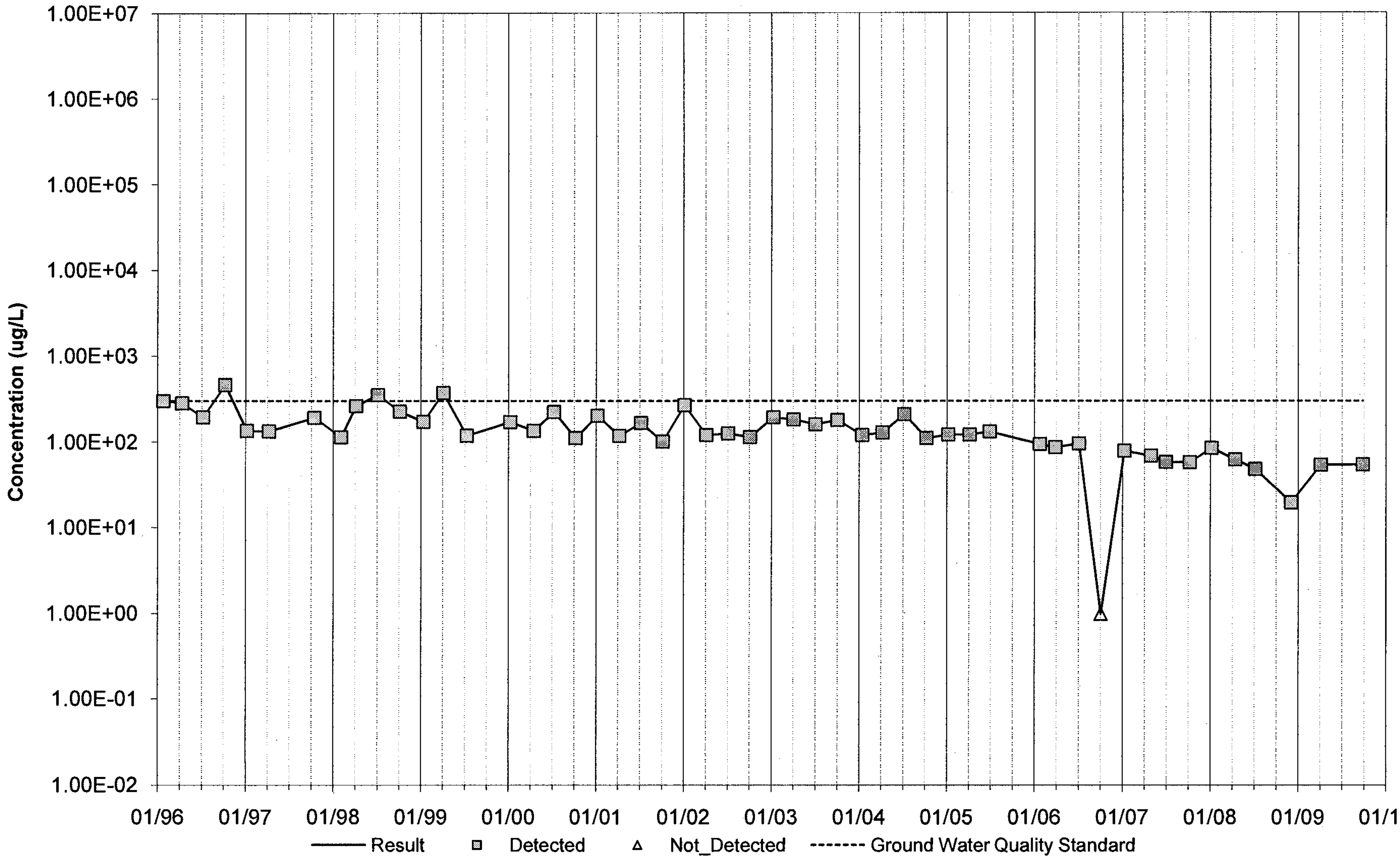
Monitoring Well: 42R
91-20-3 (Naphthalene)
Log Scale Concentrations

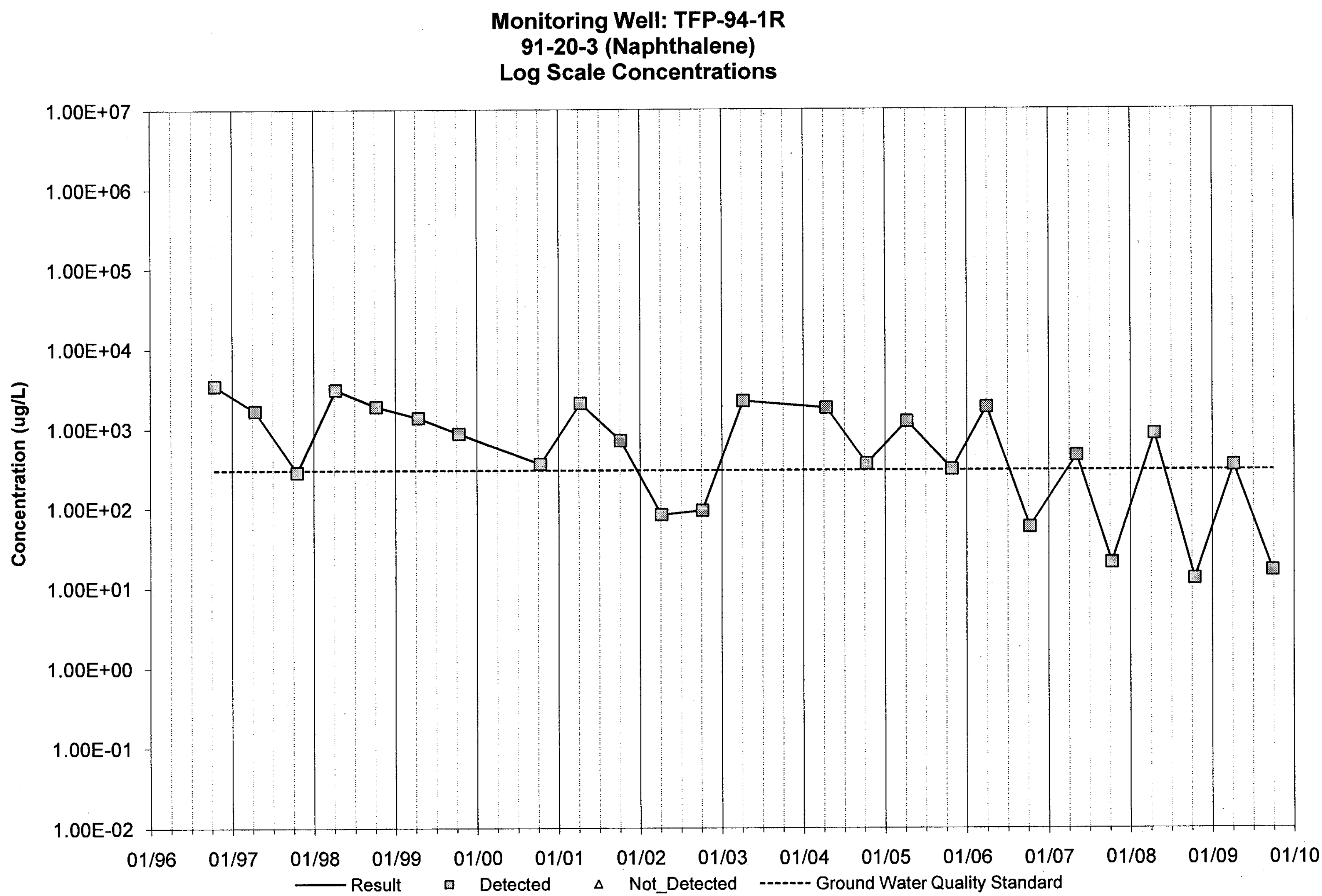


Monitoring Well: MW-2
91-20-3 (Naphthalene)
Log Scale Concentrations



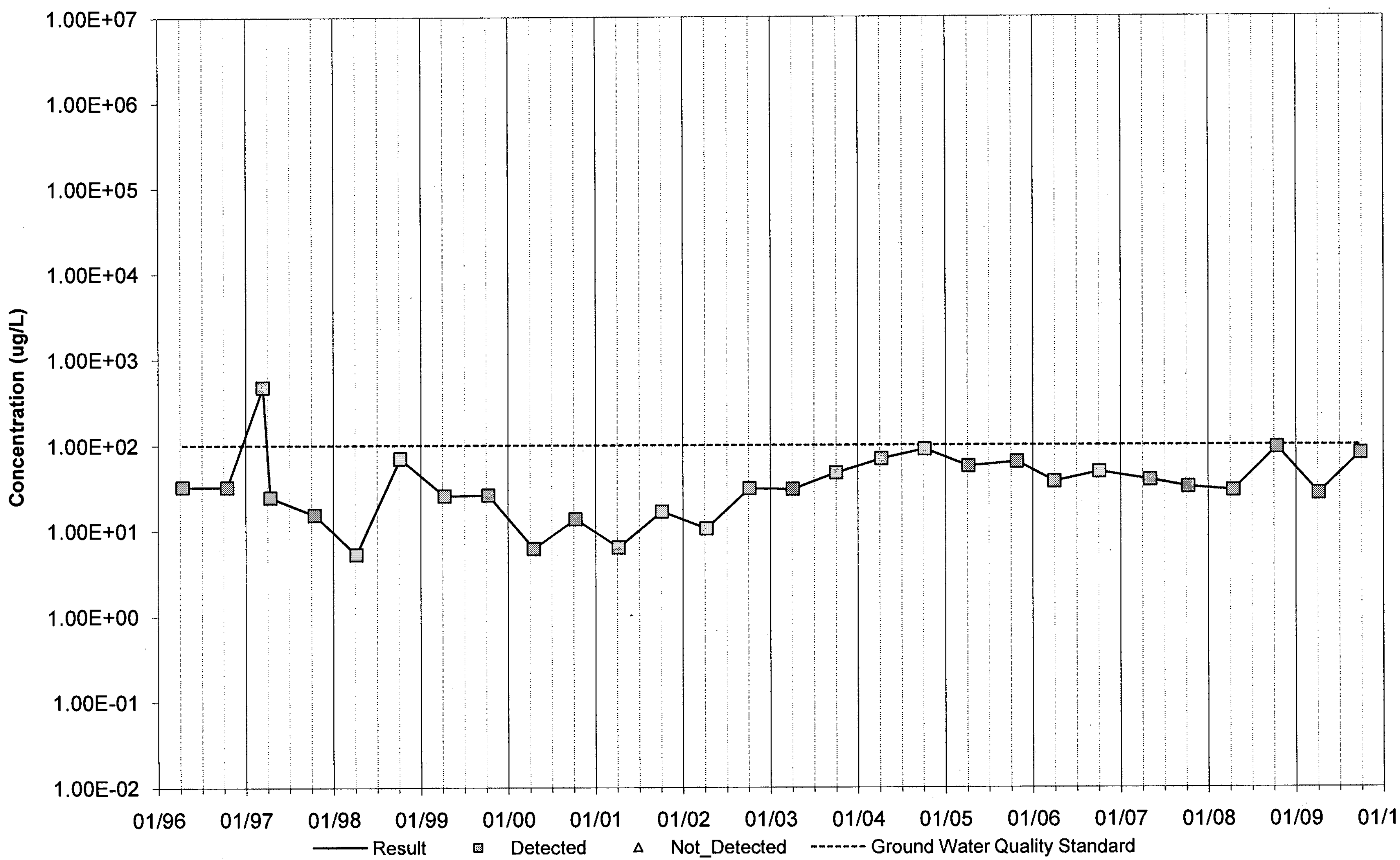
Monitoring Well: PW-2
91-20-3 (Naphthalene)
Log Scale Concentrations



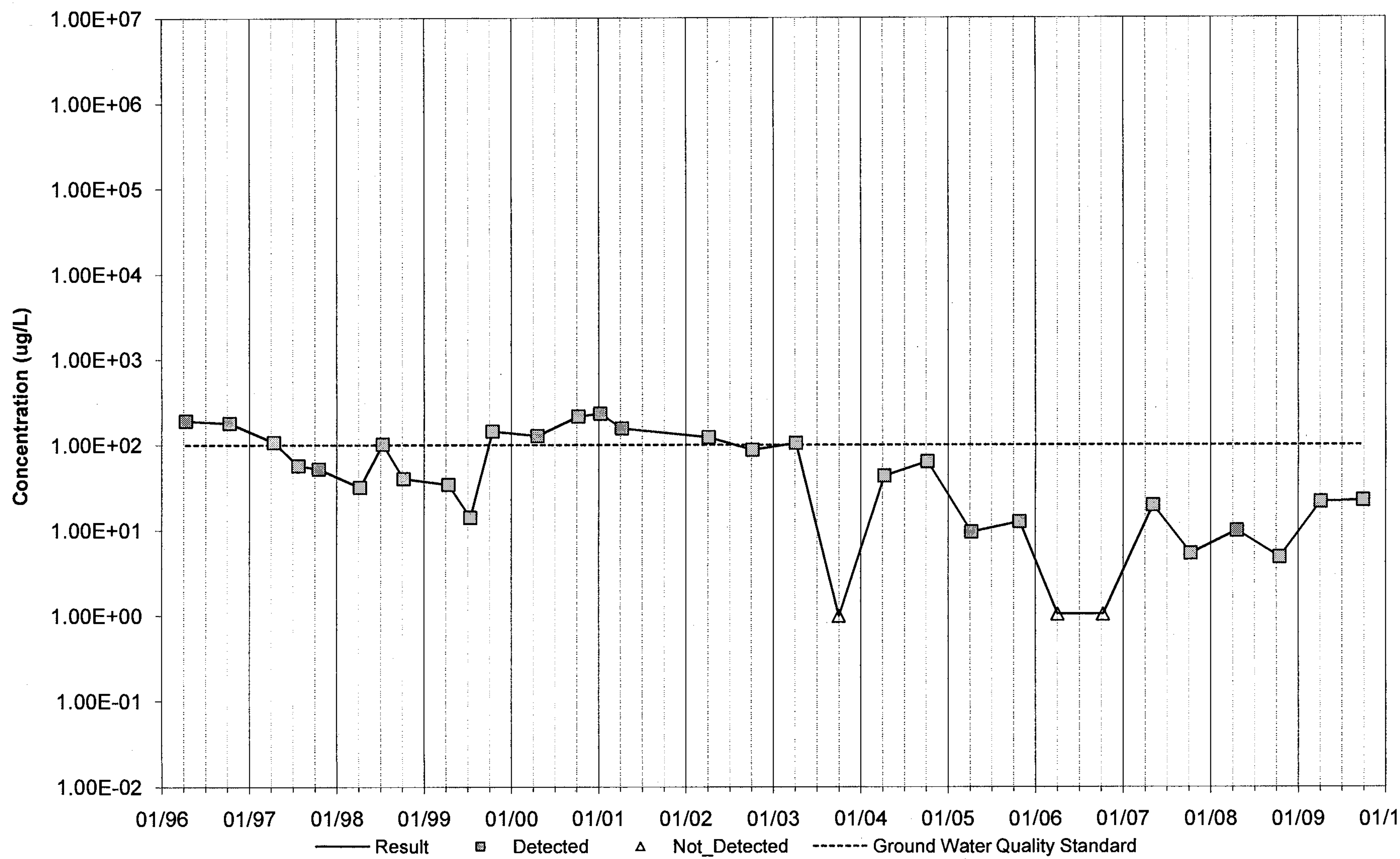


Monitoring Well: TFP-94-1R
91-20-3 (Naphthalene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

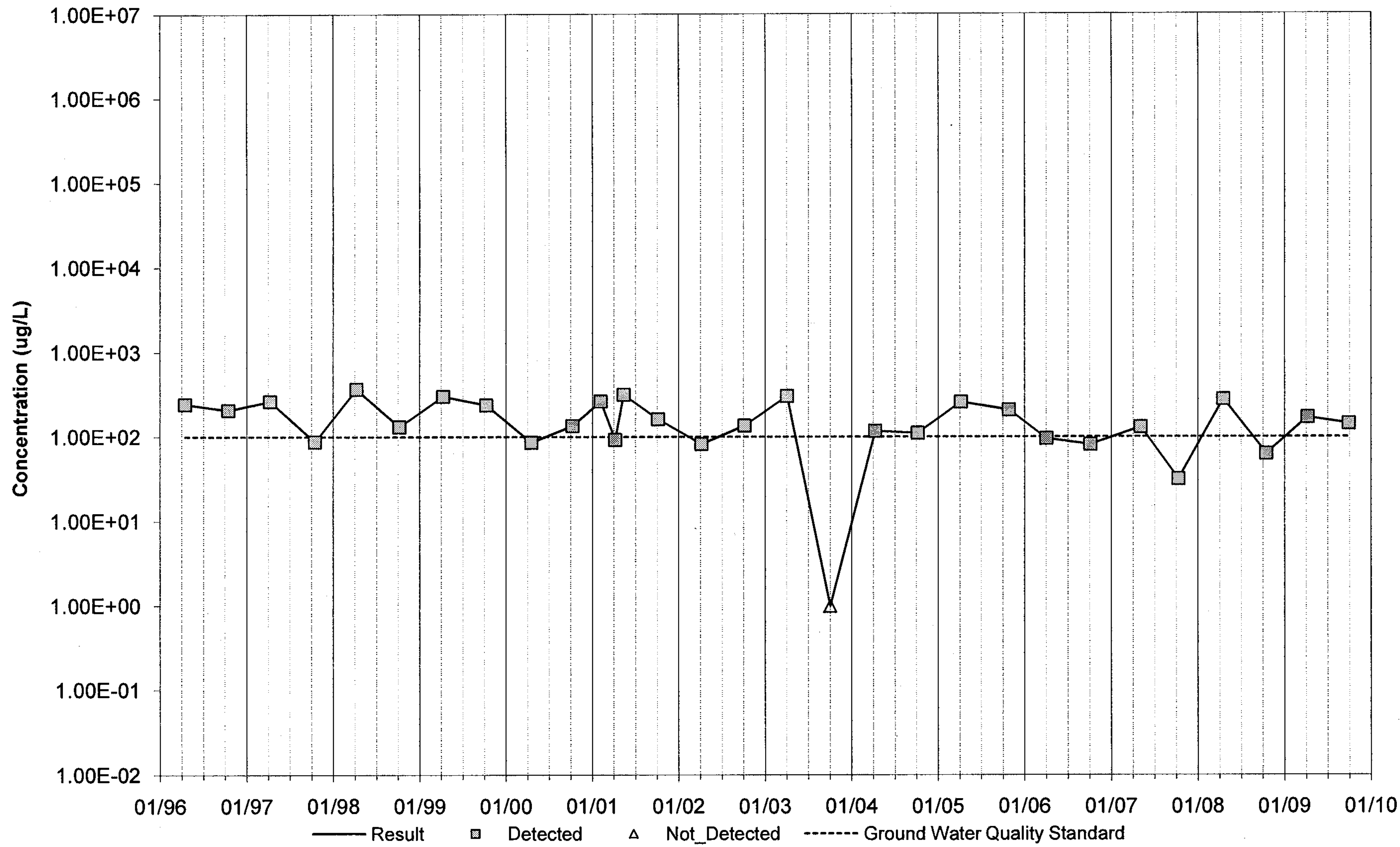
Monitoring Well: 19R
91-57-6 (2-Methylnaphthalene)
Log Scale Concentrations



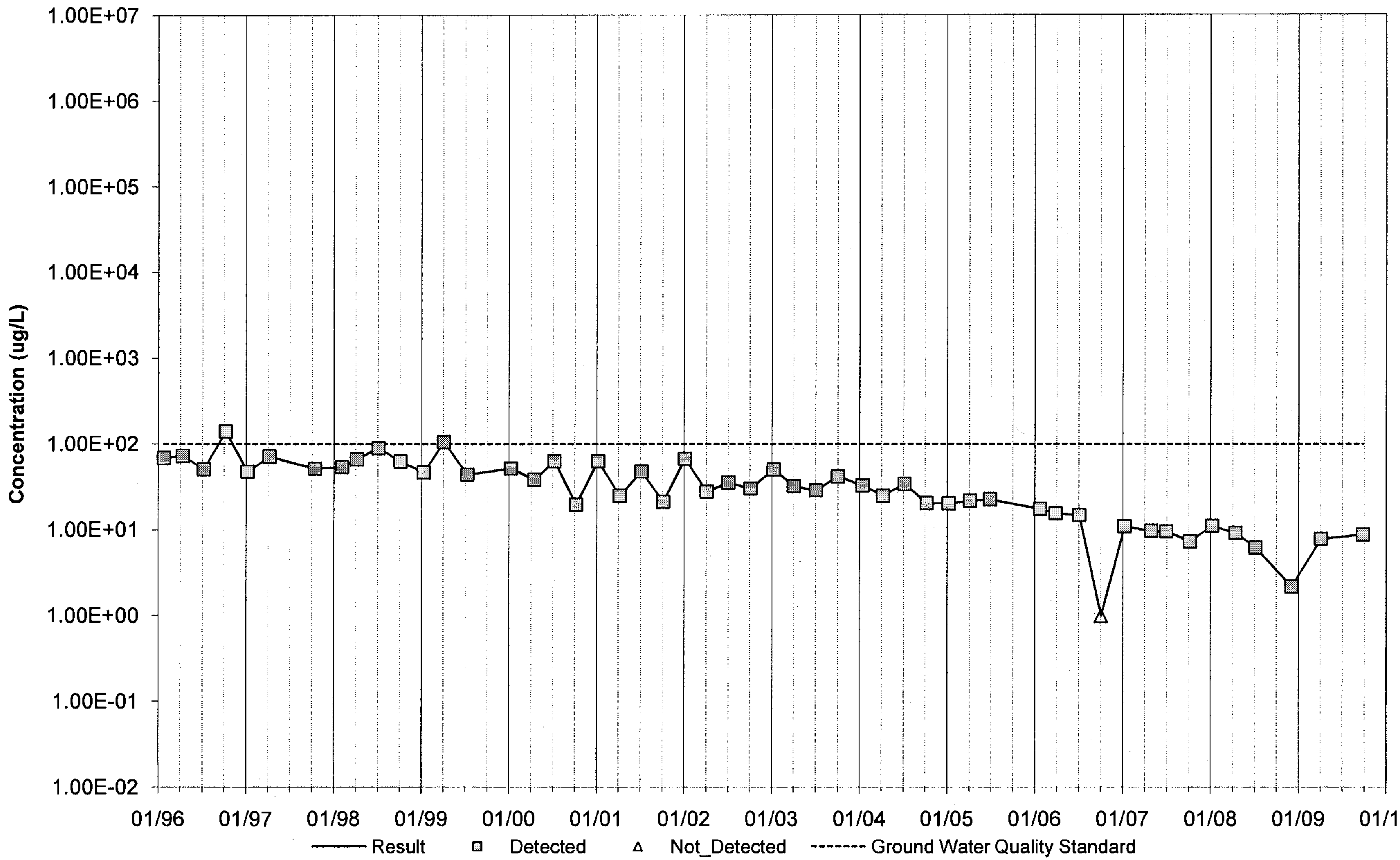
Monitoring Well: 38R
91-57-6 (2-Methylnaphthalene)
Log Scale Concentrations



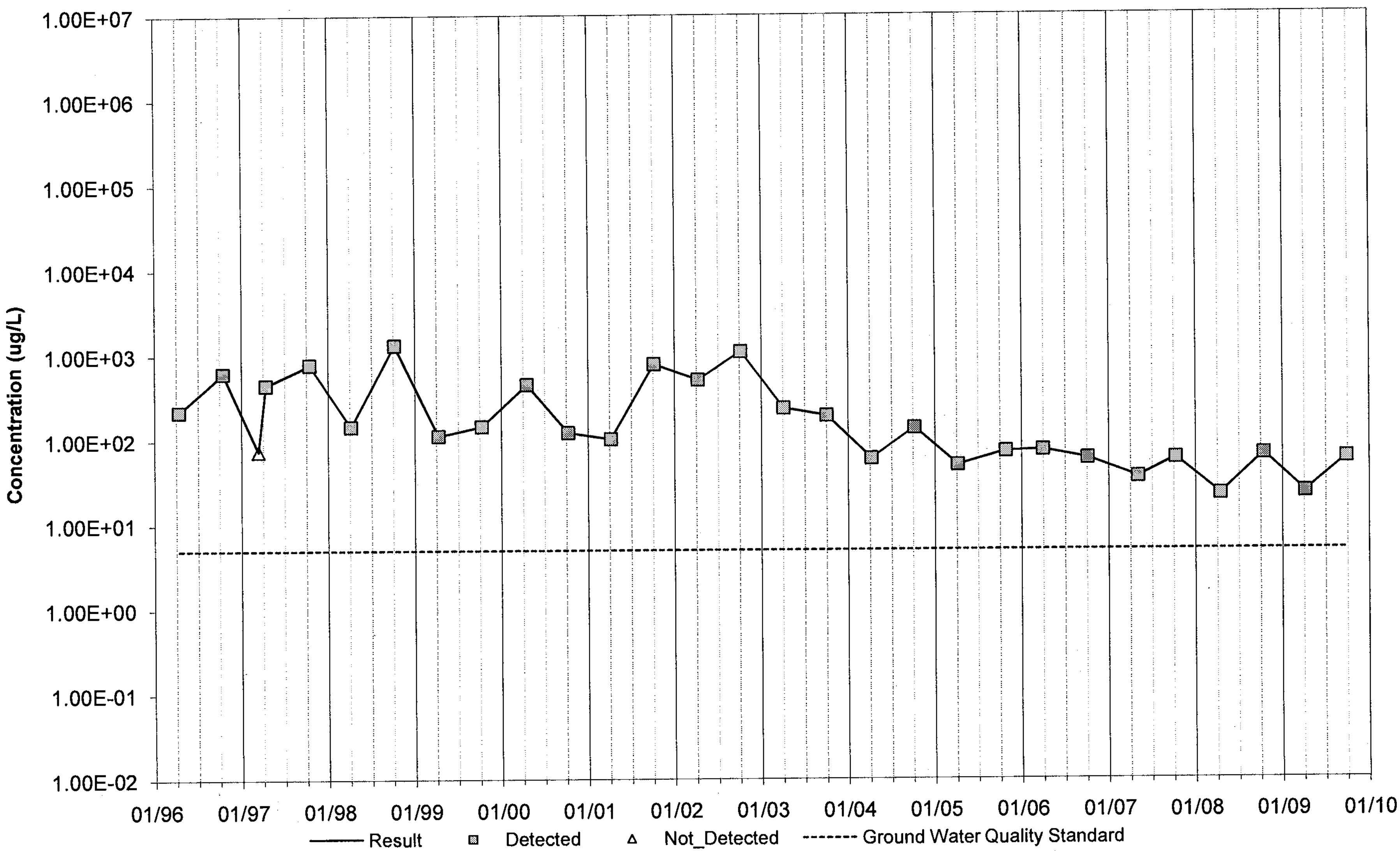
Monitoring Well: MW-2
91-57-6 (2-Methylnaphthalene)
Log Scale Concentrations



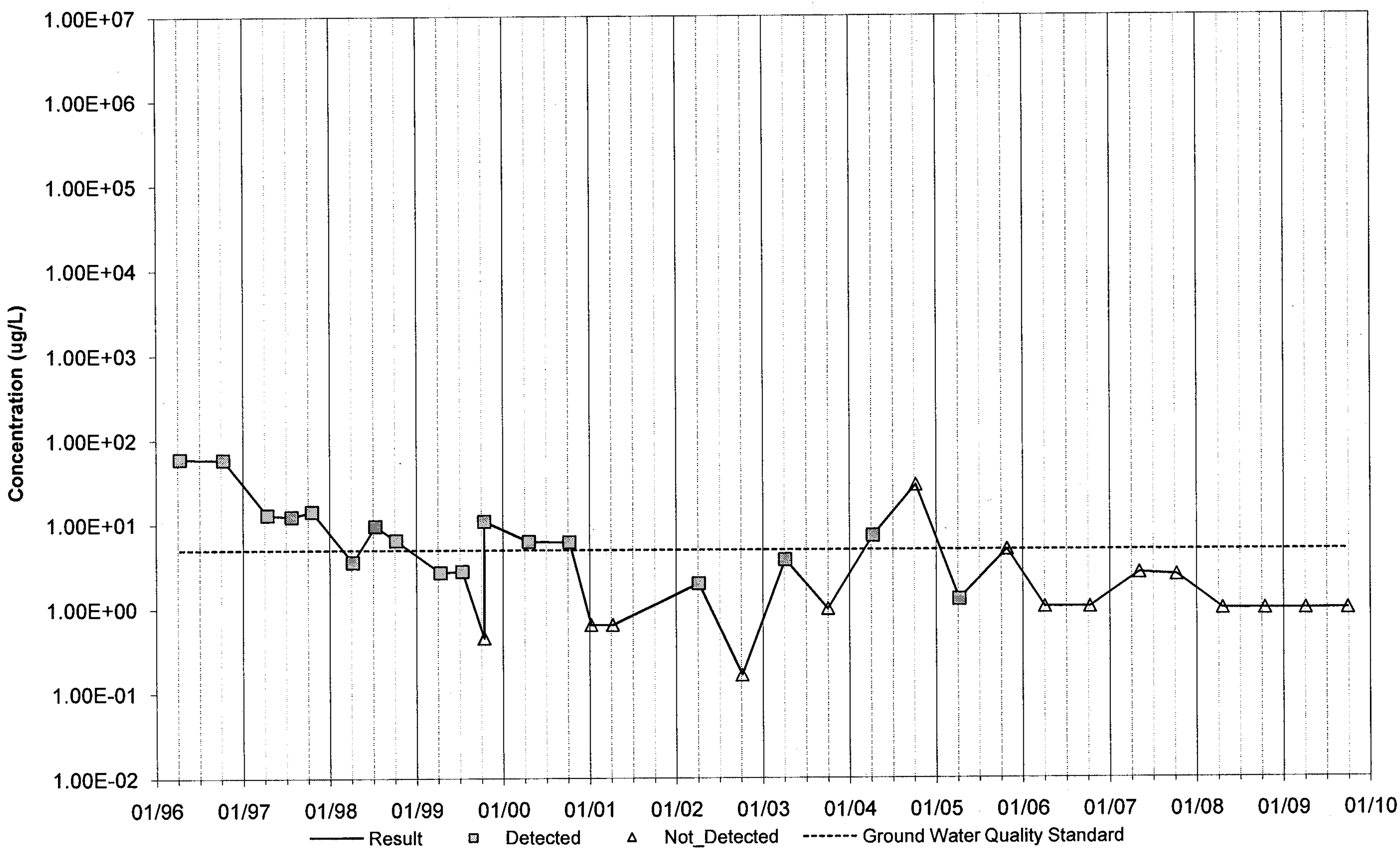
Monitoring Well: PW-2
91-57-6 (2-Methylnaphthalene)
Log Scale Concentrations



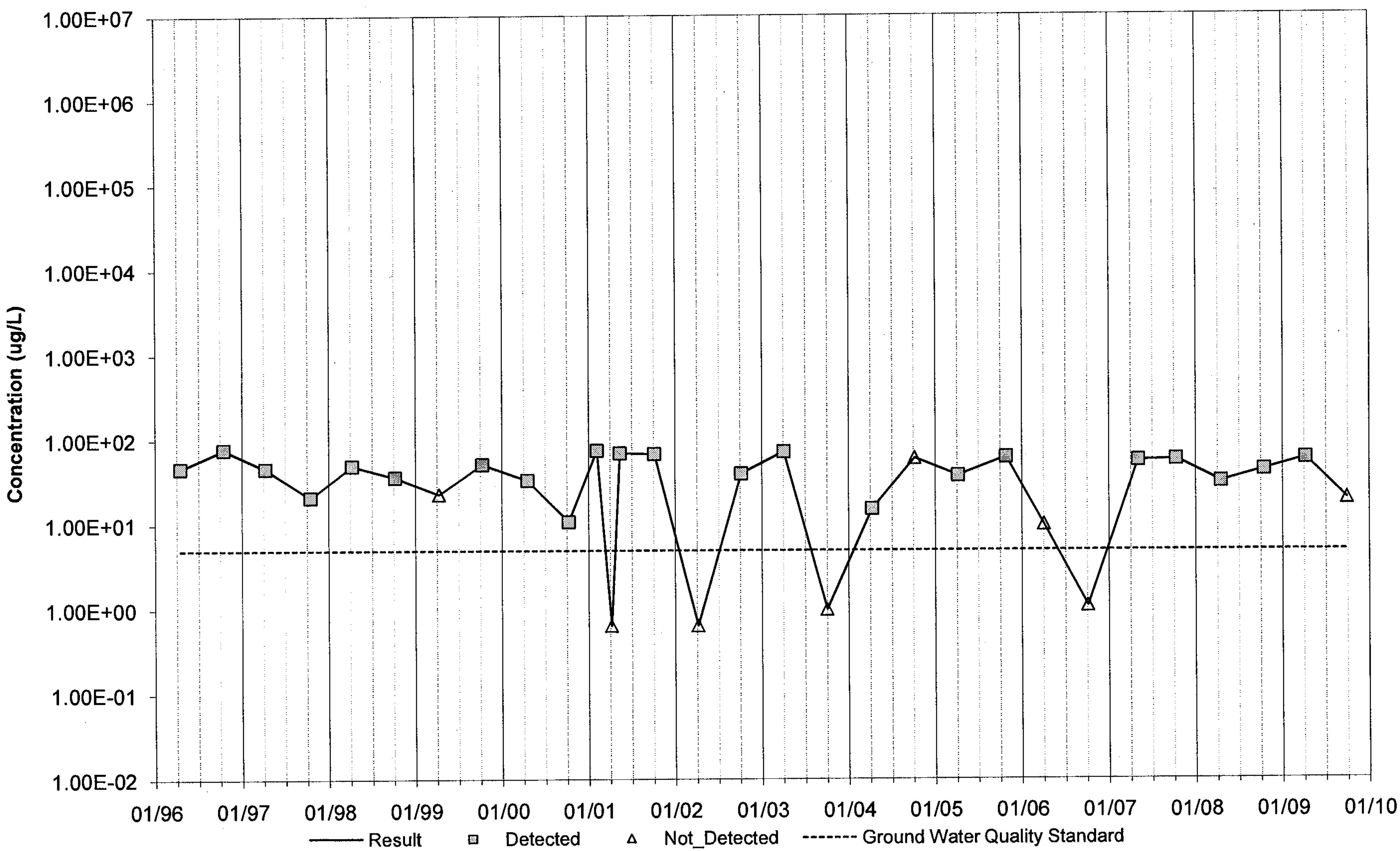
Monitoring Well: 19R
95-48-7 (2-Methylphenol)
Log Scale Concentrations

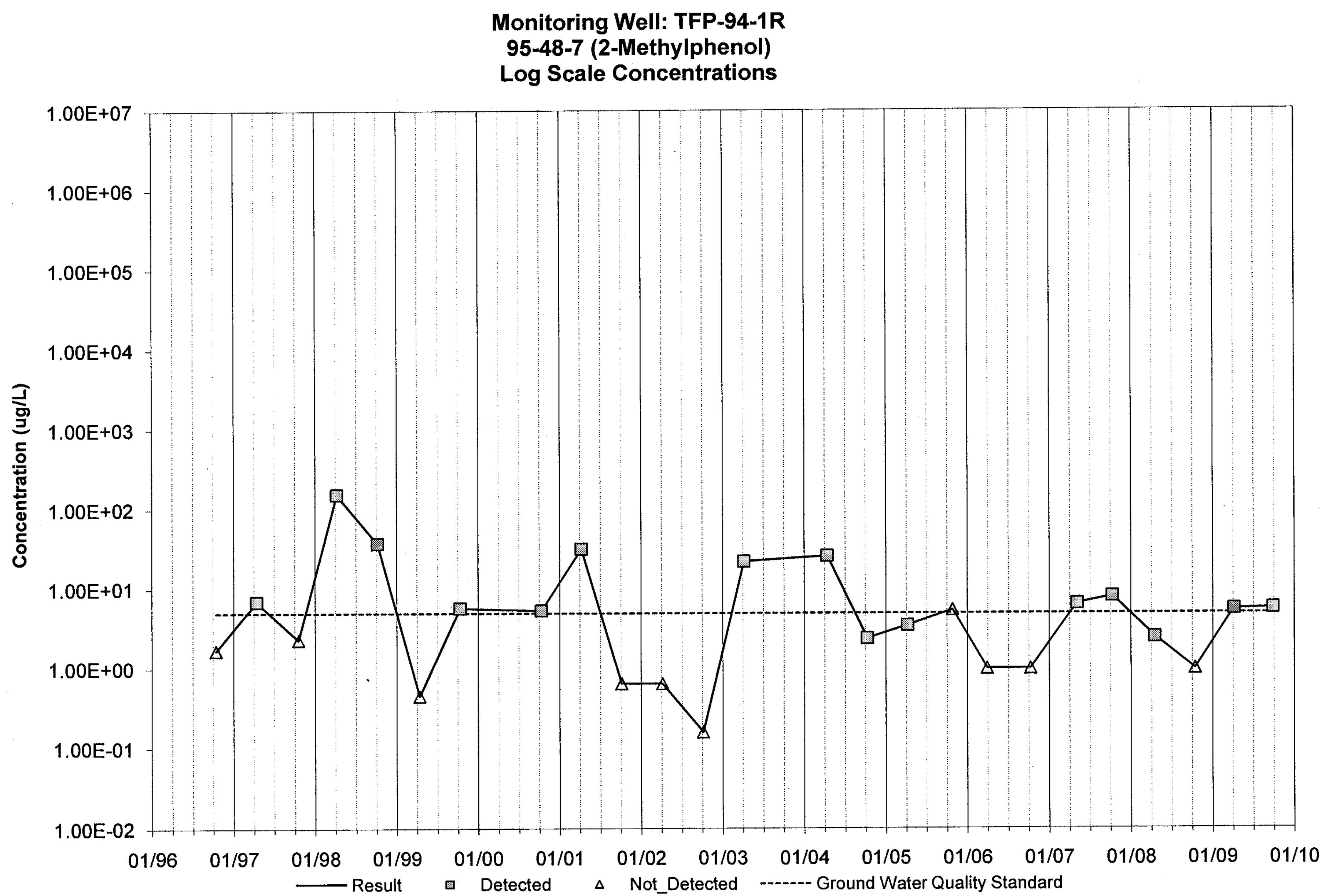


Monitoring Well: 38R
95-48-7 (2-Methylphenol)
Log Scale Concentrations

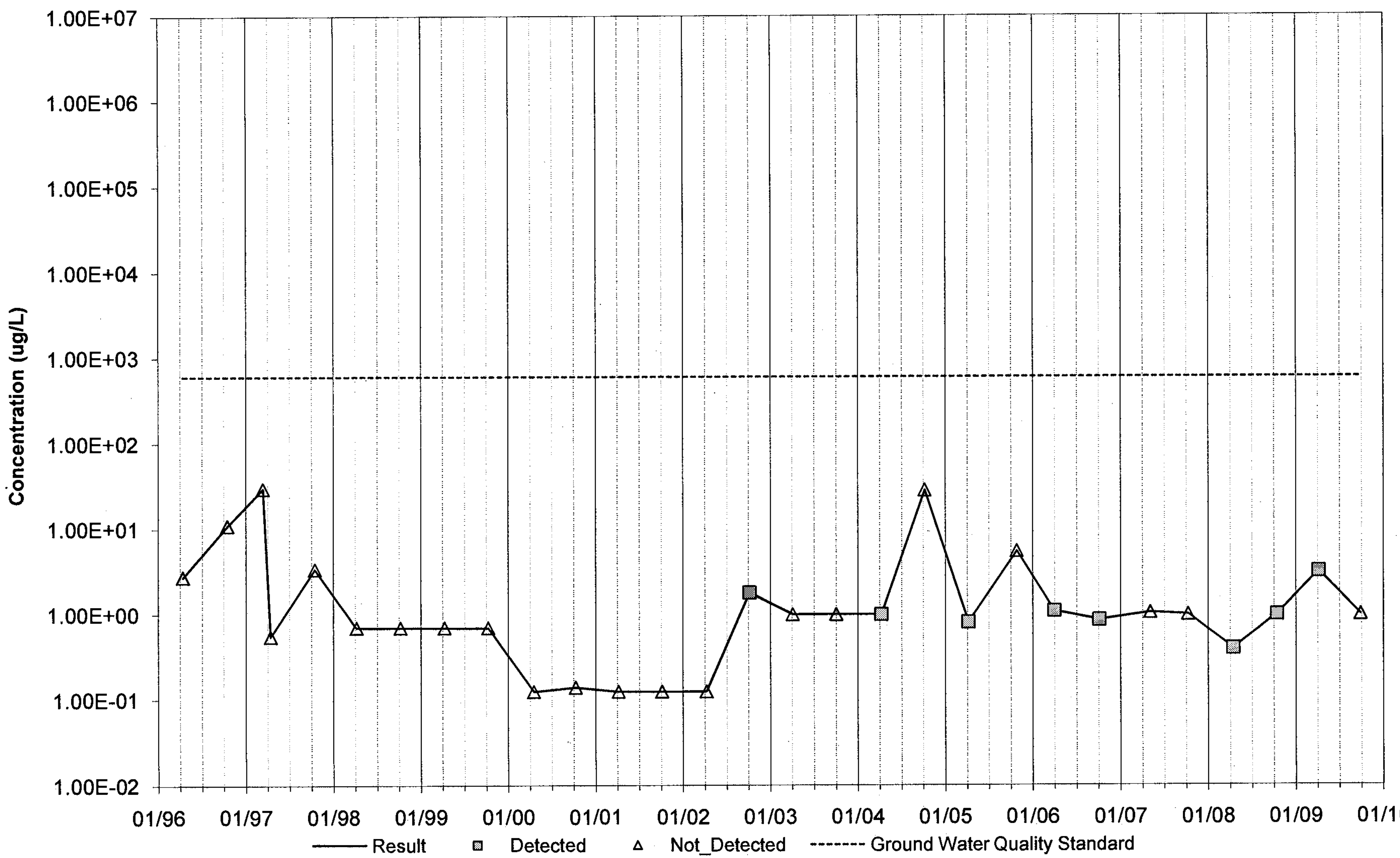


Monitoring Well: MW-2
95-48-7 (2-Methylphenol)
Log Scale Concentrations

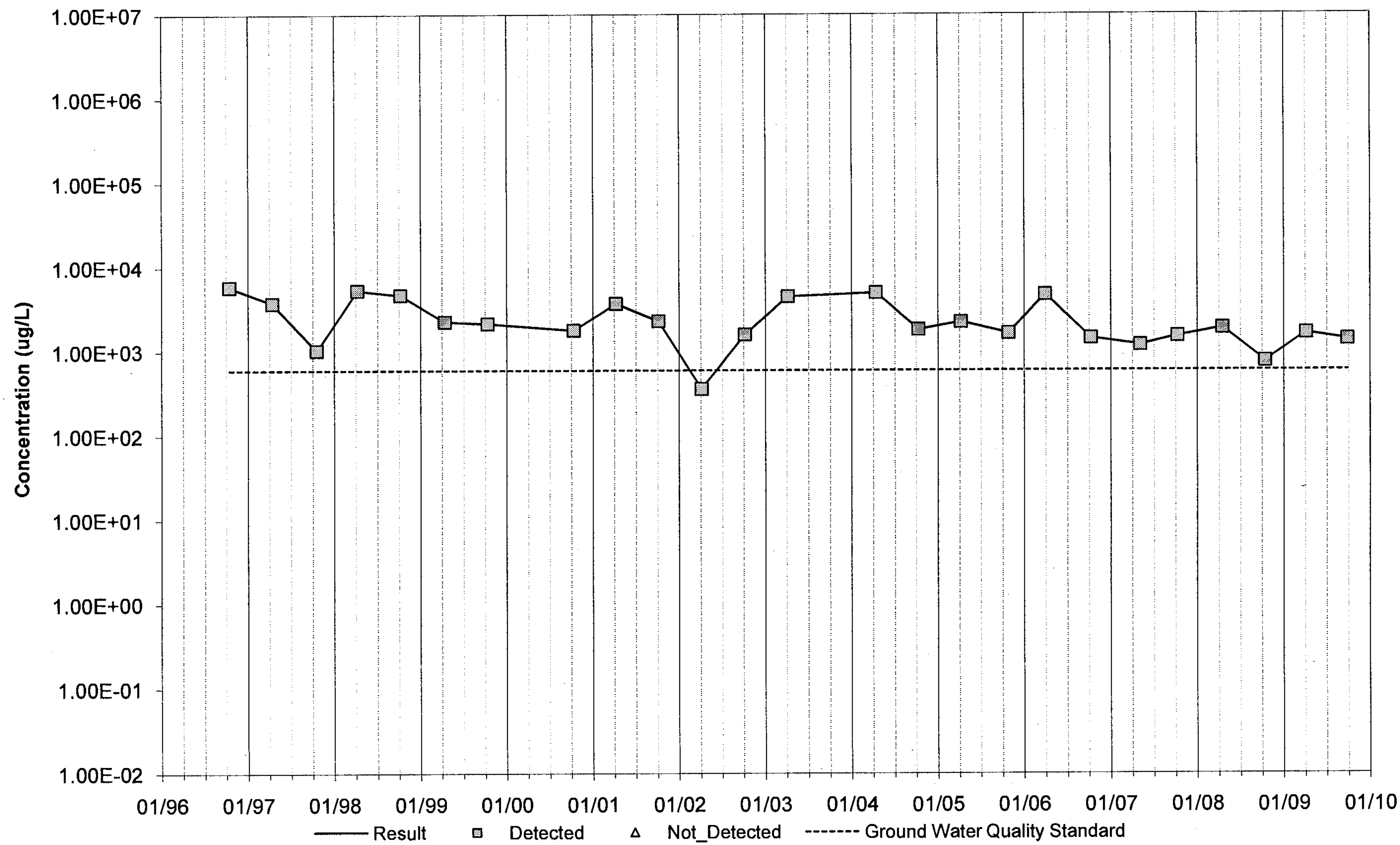



Monitoring Well: TFP-94-1R
95-48-7 (2-Methylphenol)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

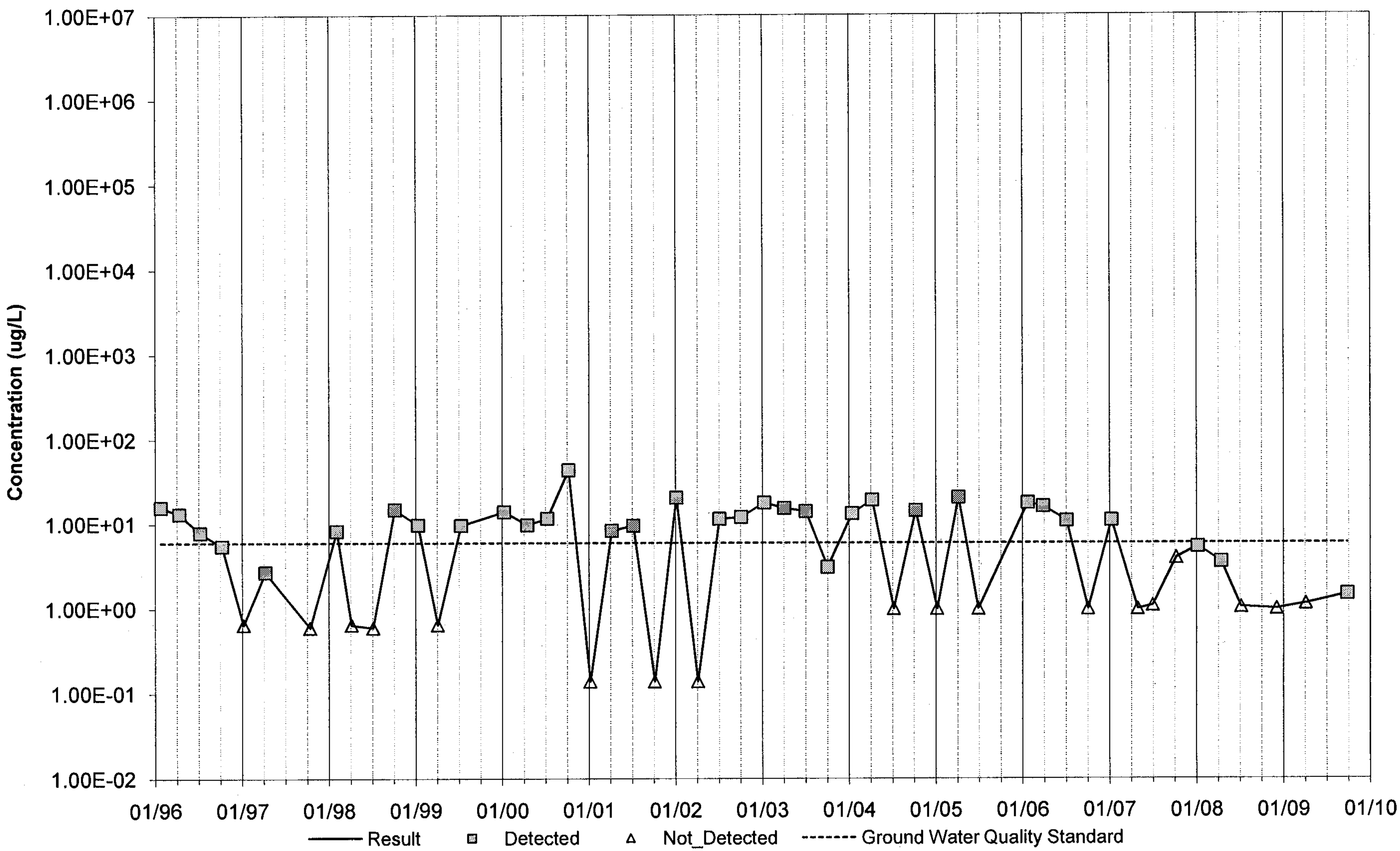
Monitoring Well: 19R
95-50-1 (1,2-Dichlorobenzene)
Log Scale Concentrations

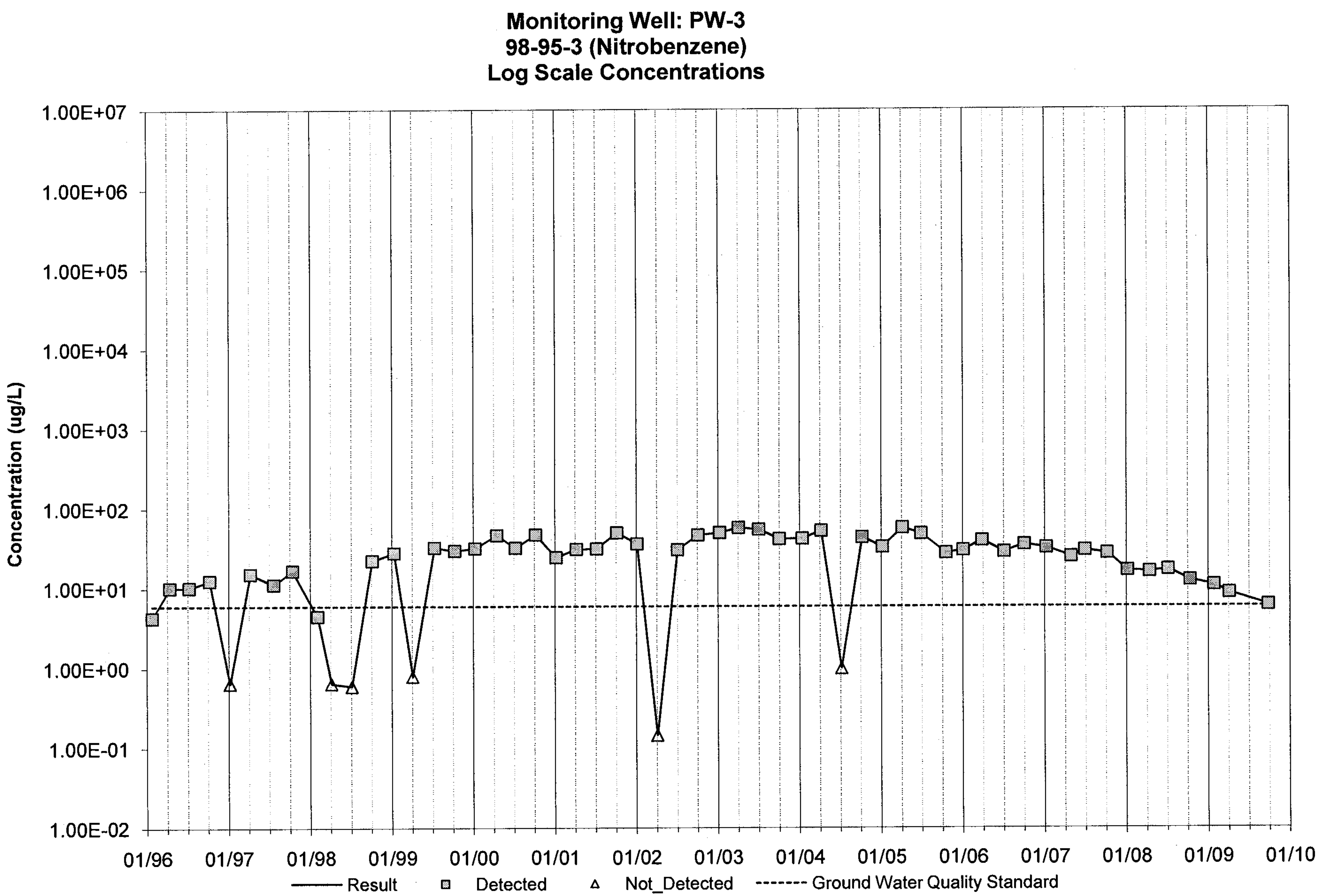


Monitoring Well: TFP-94-1R
95-50-1 (1,2-Dichlorobenzene)
Log Scale Concentrations

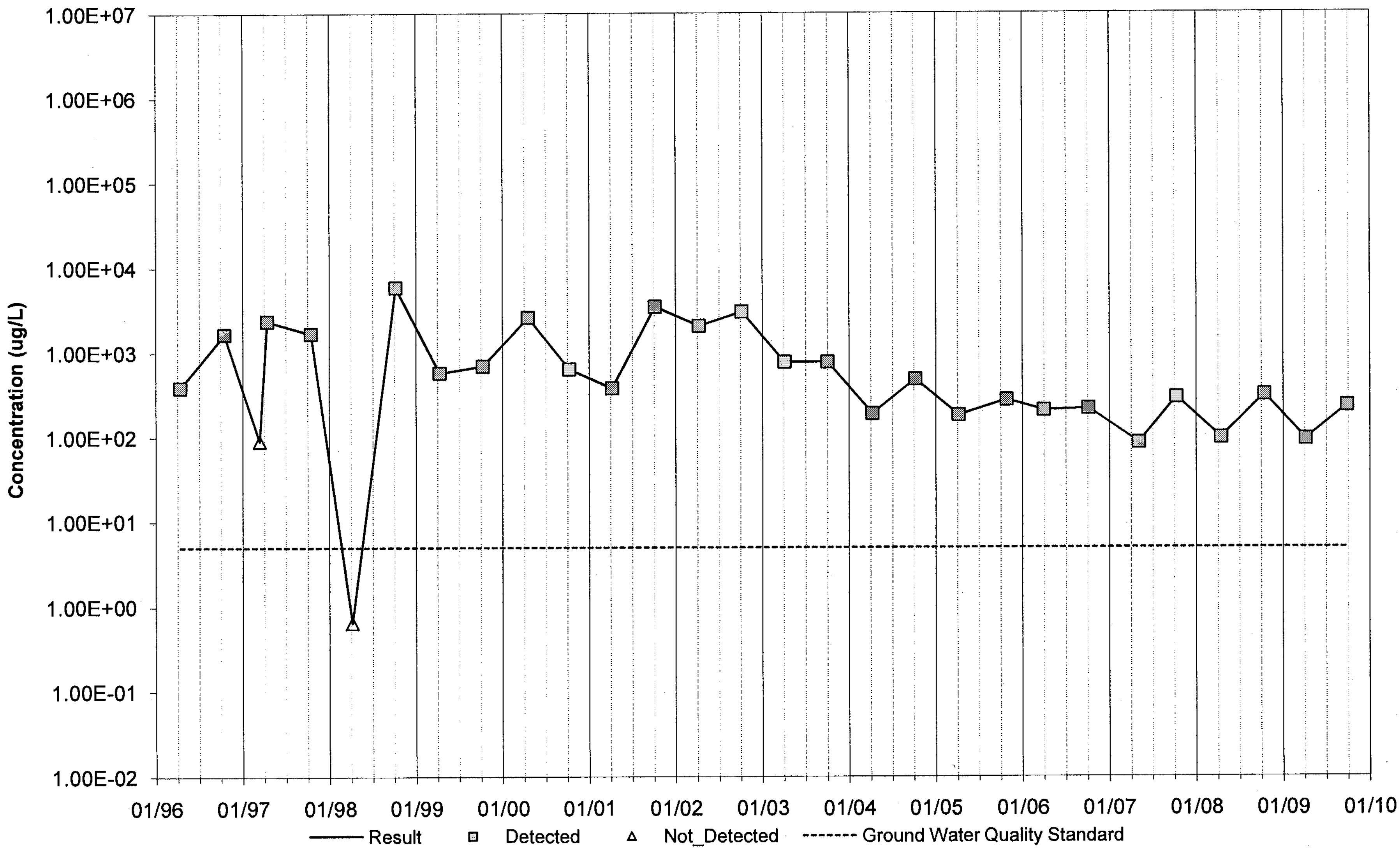


Monitoring Well: PW-2
98-95-3 (Nitrobenzene)
Log Scale Concentrations

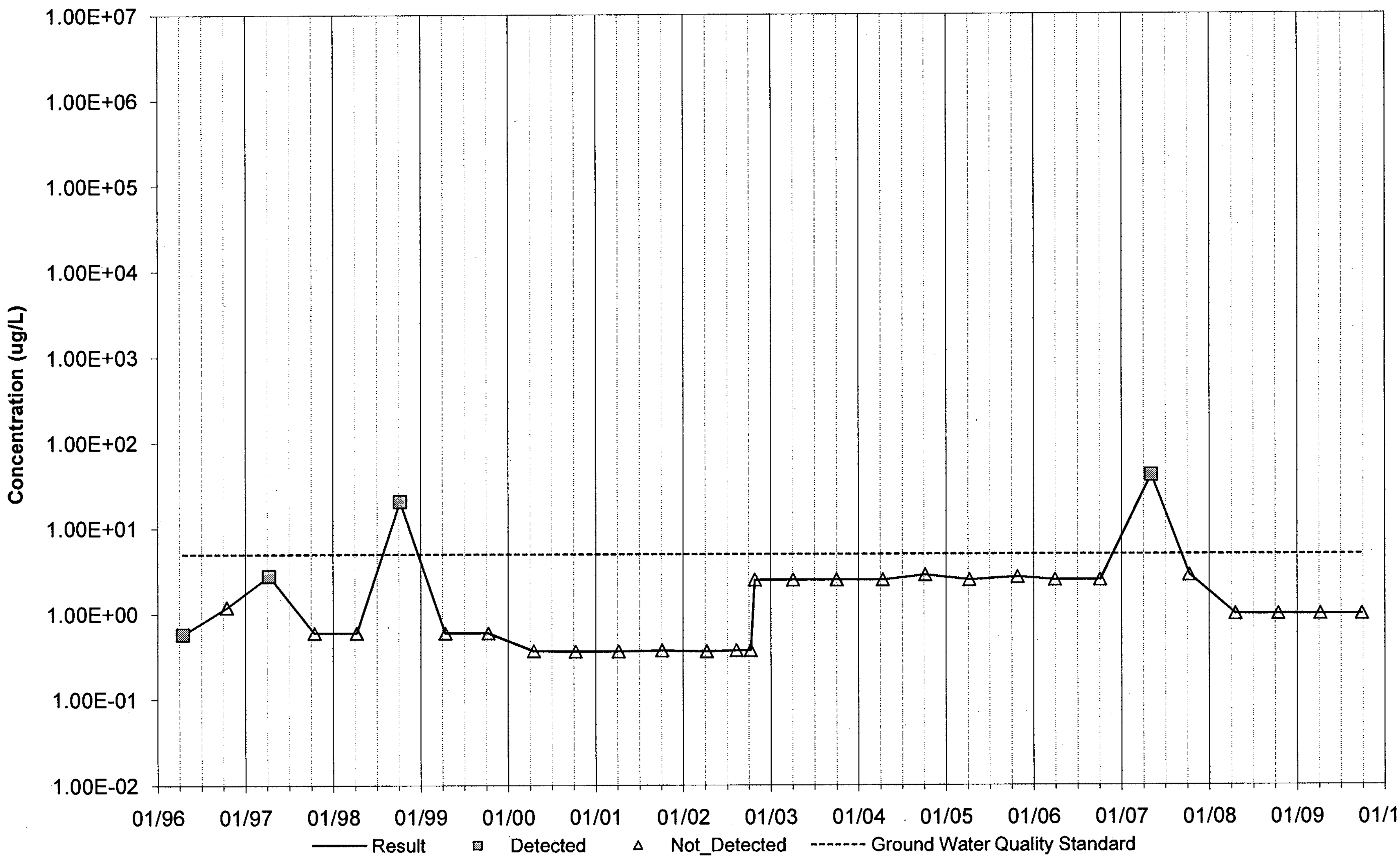


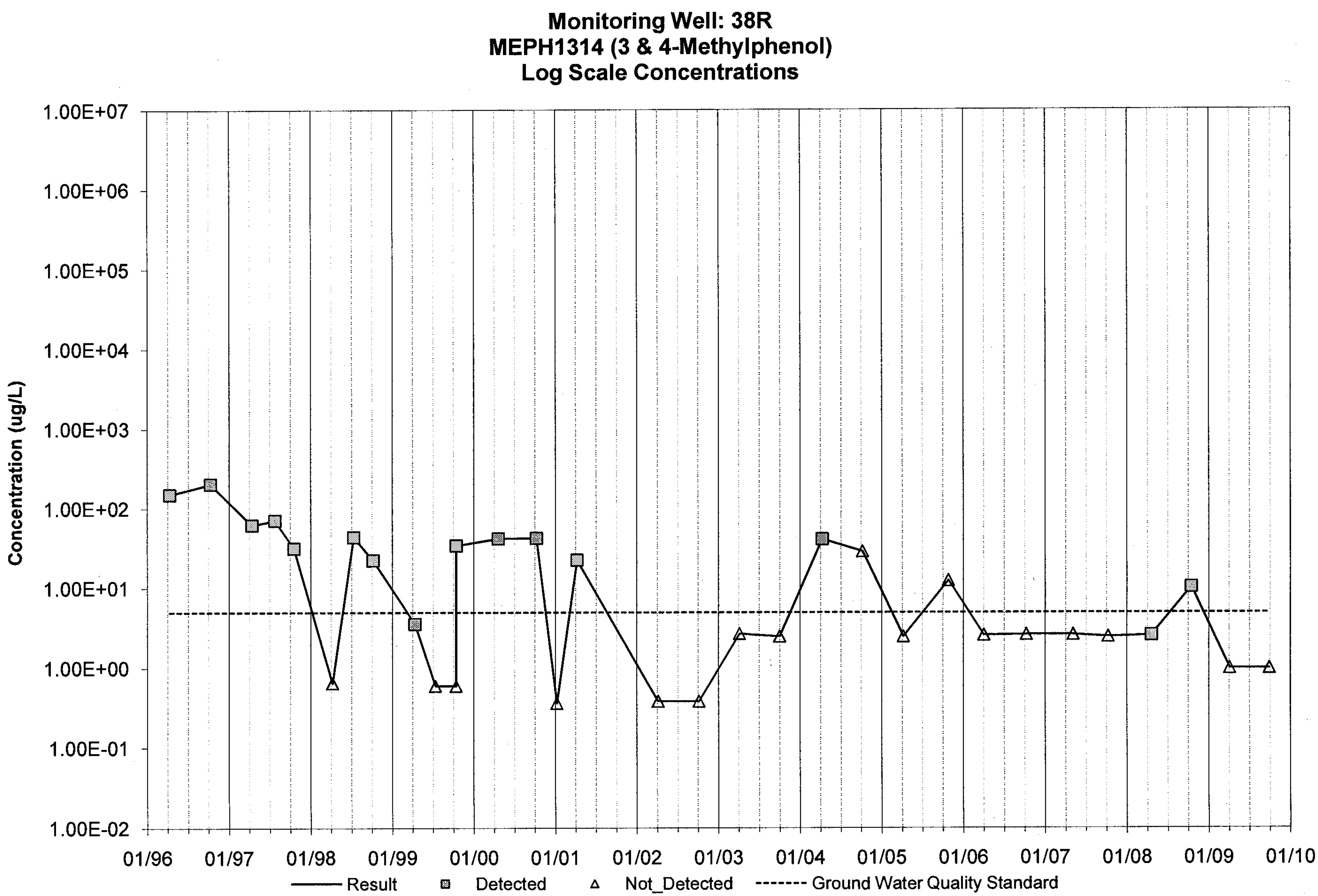

Monitoring Well: PW-3
98-95-3 (Nitrobenzene)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: 19R
MEPH1314 (3 & 4-Methylphenol)
Log Scale Concentrations



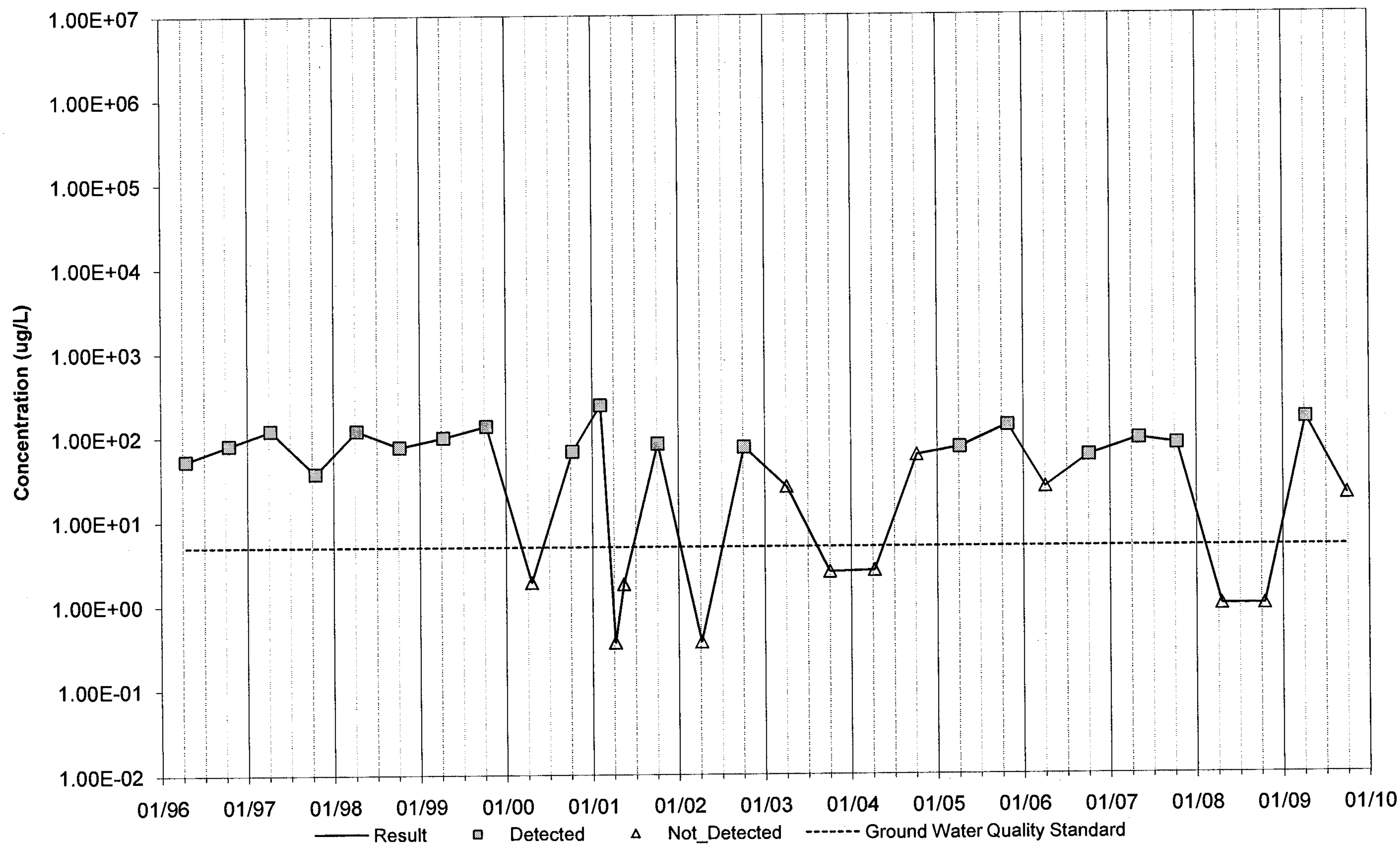
Monitoring Well: 28R
MEPH1314 (3 & 4-Methylphenol)
Log Scale Concentrations



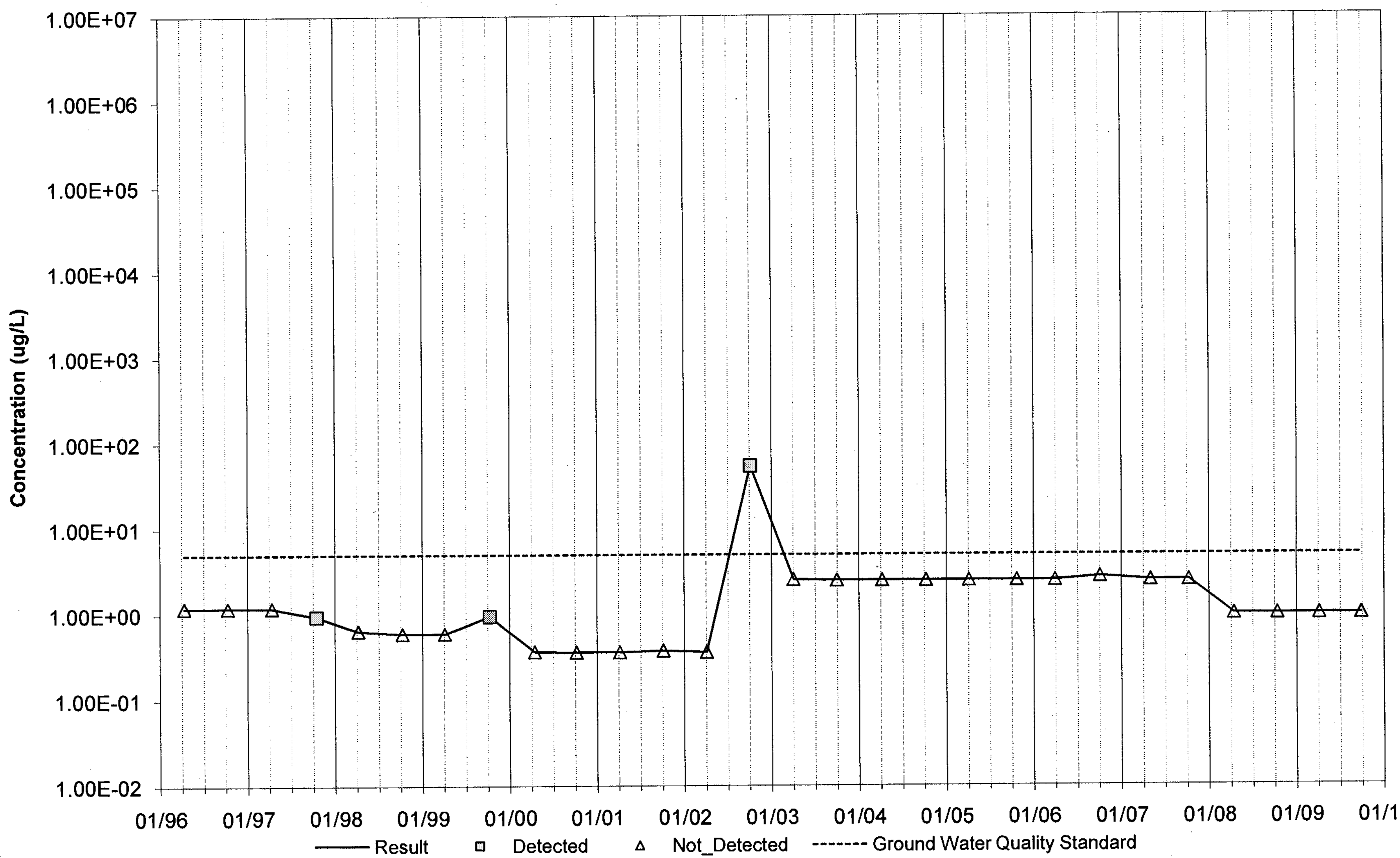


Monitoring Well: 38R
MEPH1314 (3 & 4-Methylphenol)
Log Scale Concentrations
Concentration (ug/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

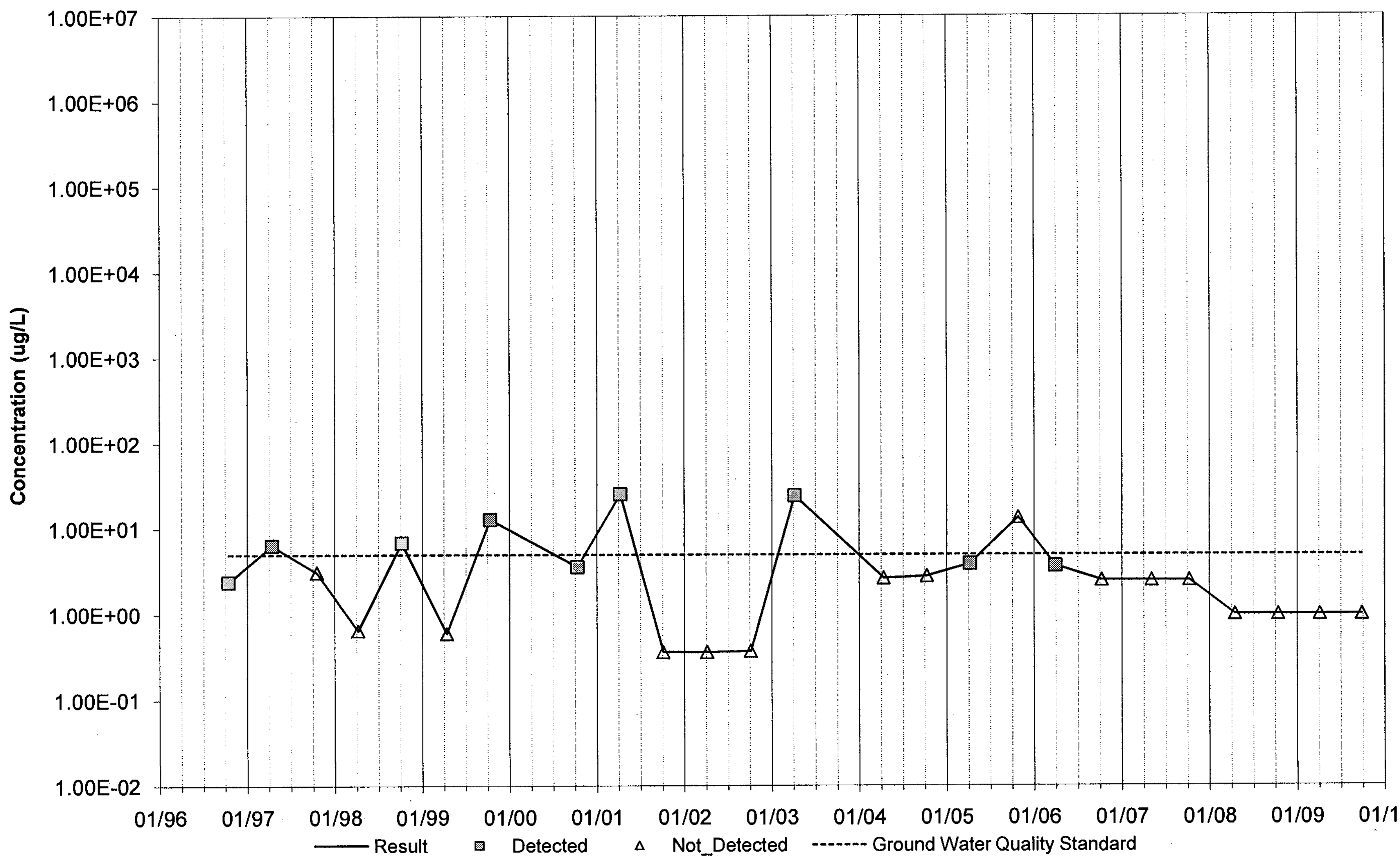
Monitoring Well: MW-2
MEPH1314 (3 & 4-Methylphenol)
Log Scale Concentrations



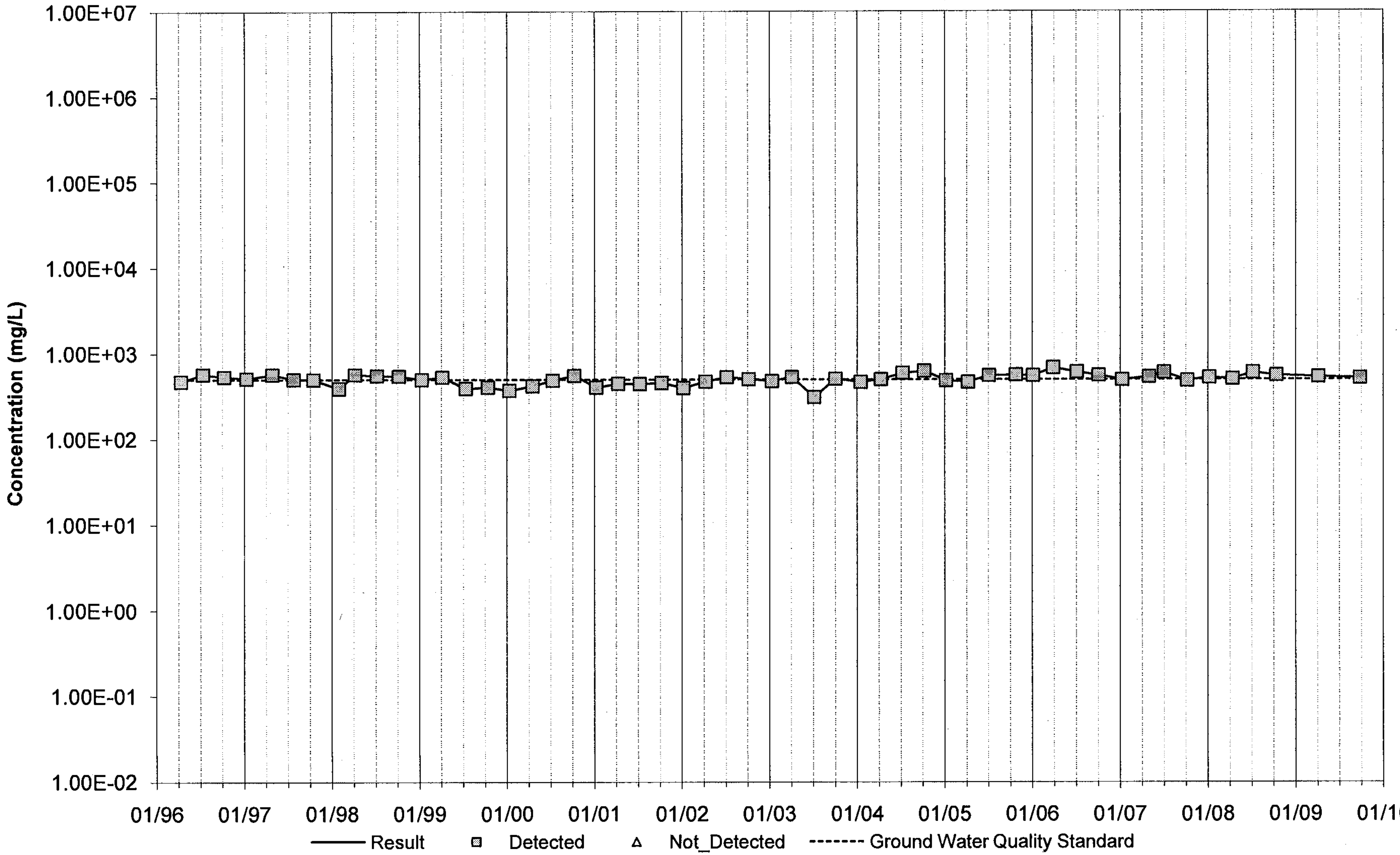
Monitoring Well: RCRA-D9
MEPH1314 (3 & 4-Methylphenol)
Log Scale Concentrations



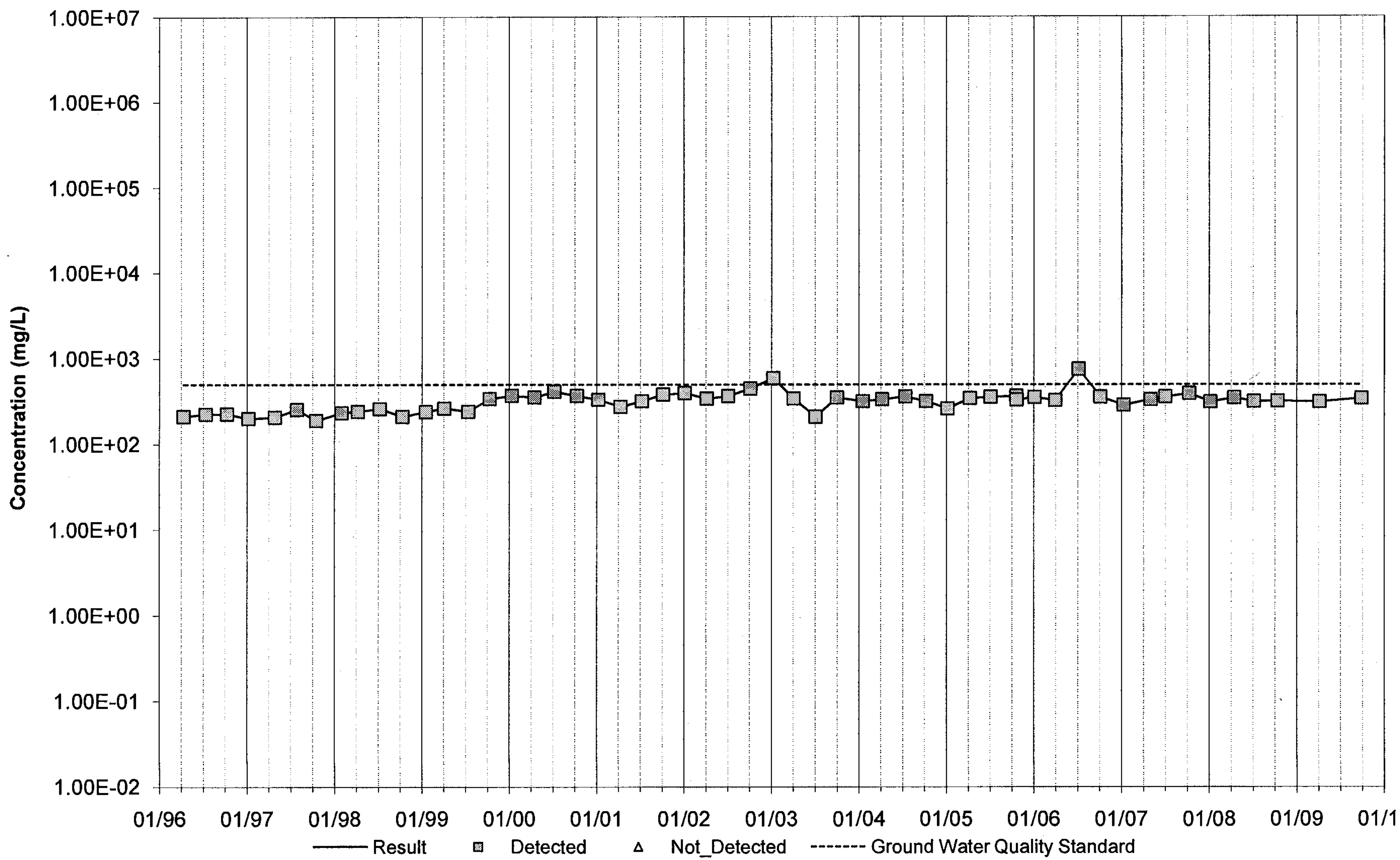
Monitoring Well: TFP-94-1R
MEPH1314 (3 & 4-Methylphenol)
Log Scale Concentrations

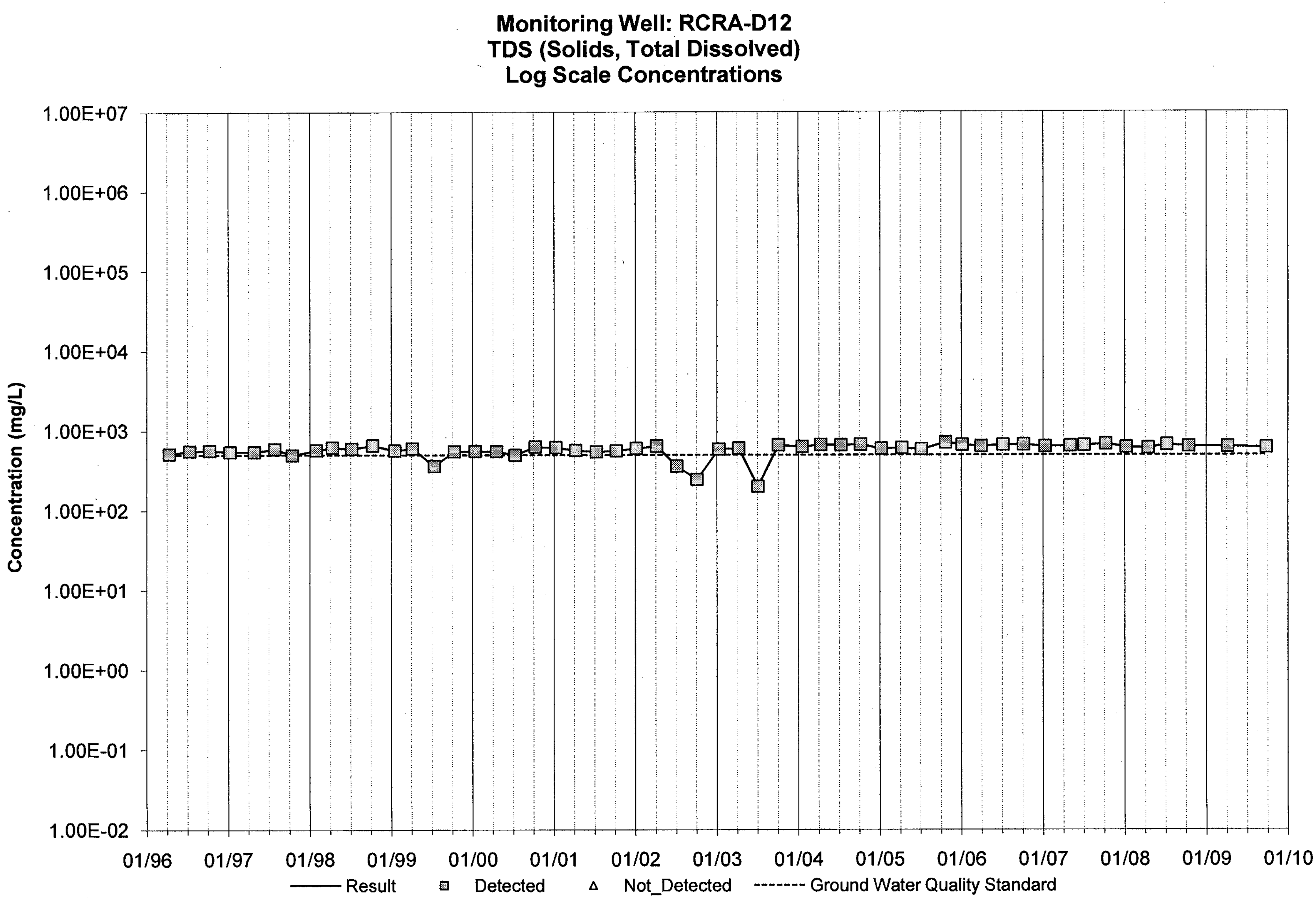


Monitoring Well: RCRA-D1
TDS (Solids, Total Dissolved)
Log Scale Concentrations

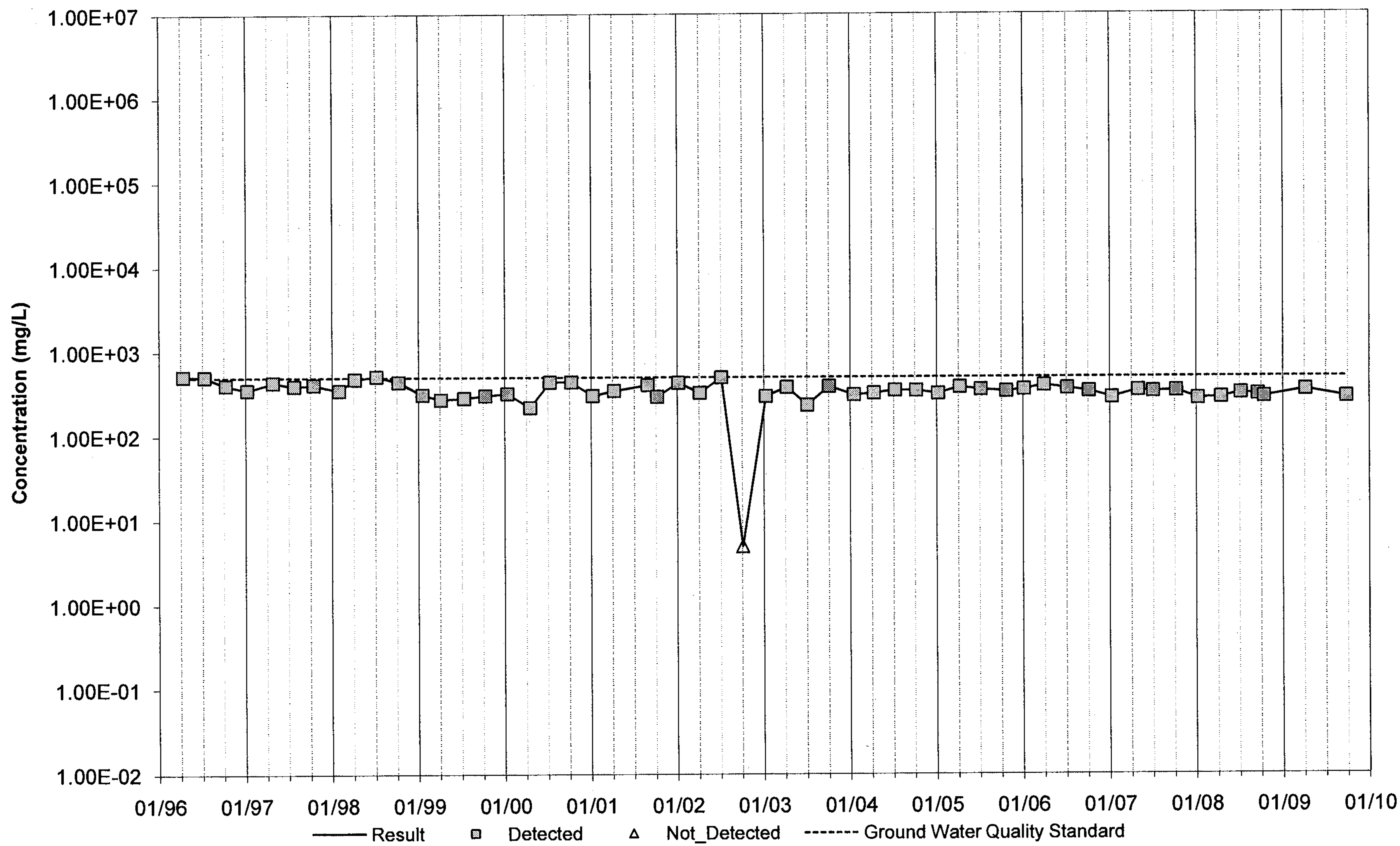


Monitoring Well: RCRA-D10
TDS (Solids, Total Dissolved)
Log Scale Concentrations

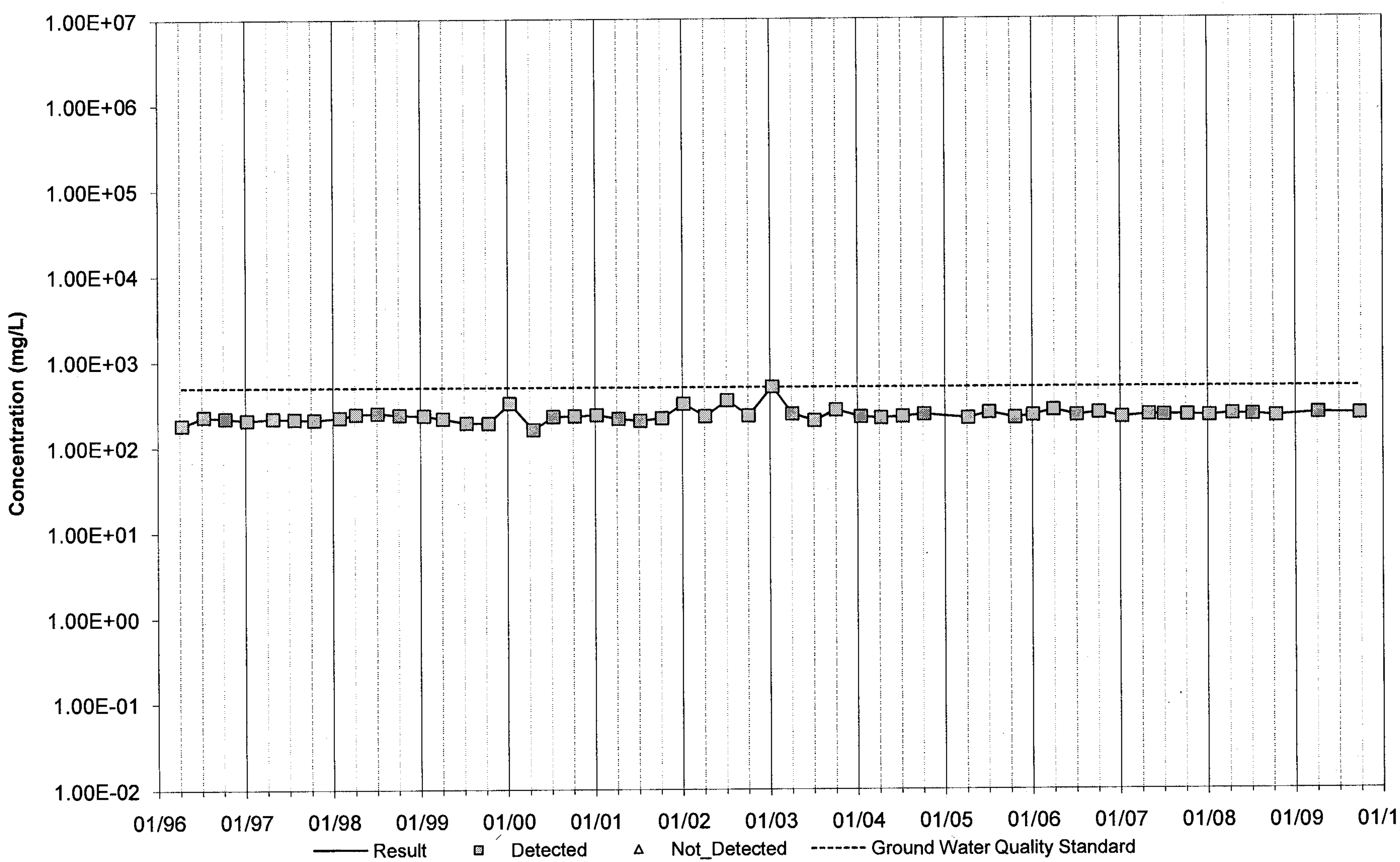



Monitoring Well: RCRA-D12
TDS (Solids, Total Dissolved)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

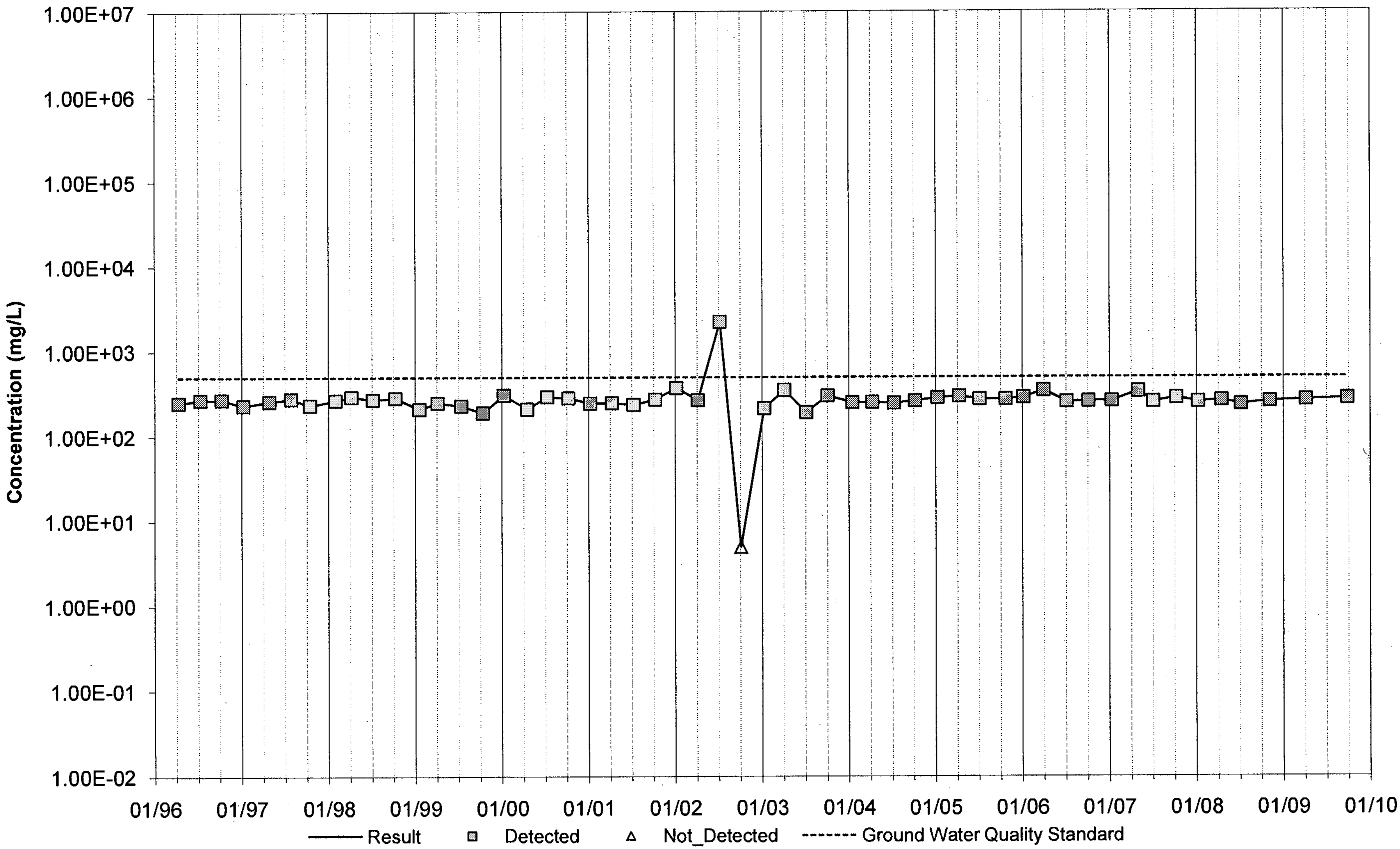
Monitoring Well: RCRA-D13
TDS (Solids, Total Dissolved)
Log Scale Concentrations

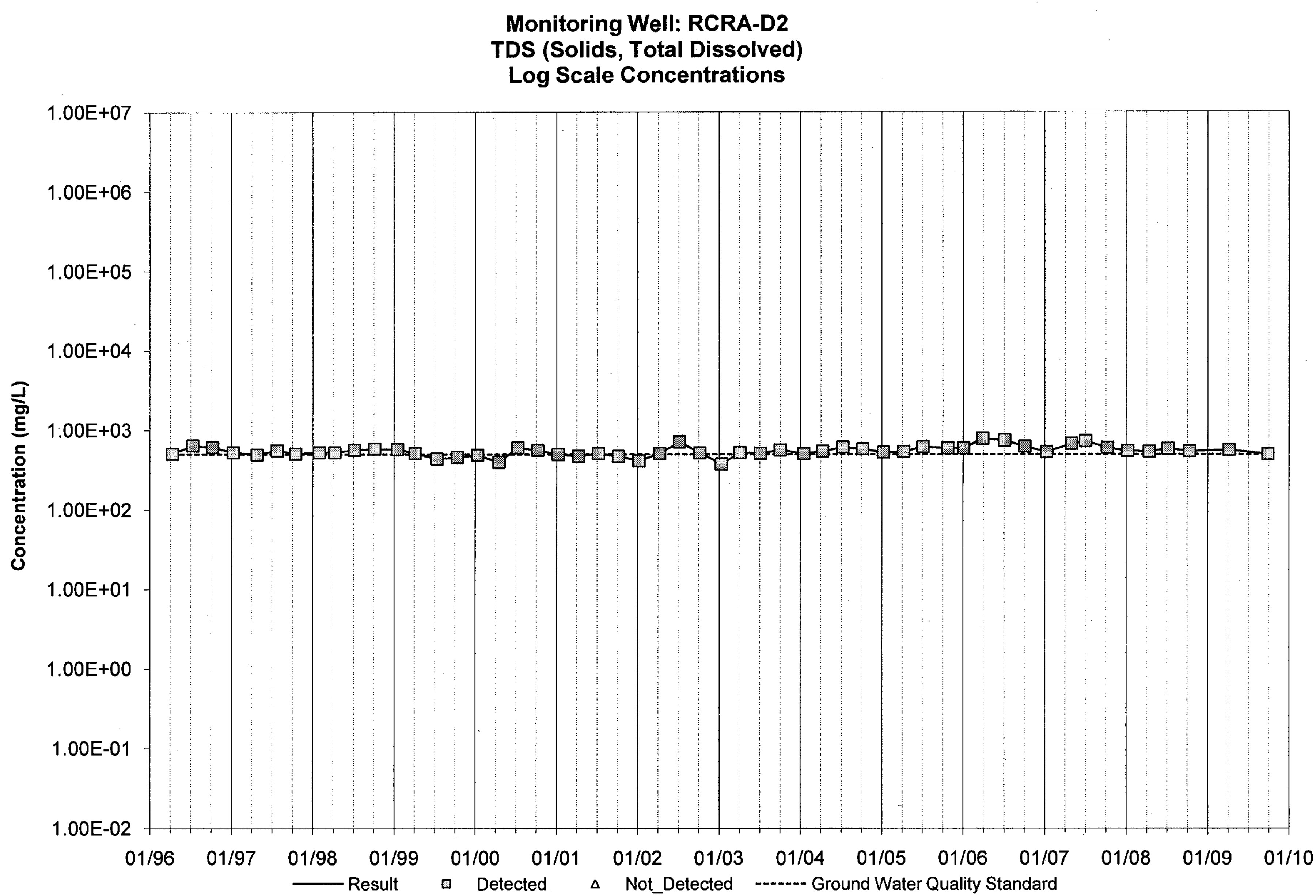


Monitoring Well: RCRA-D14
TDS (Solids, Total Dissolved)
Log Scale Concentrations



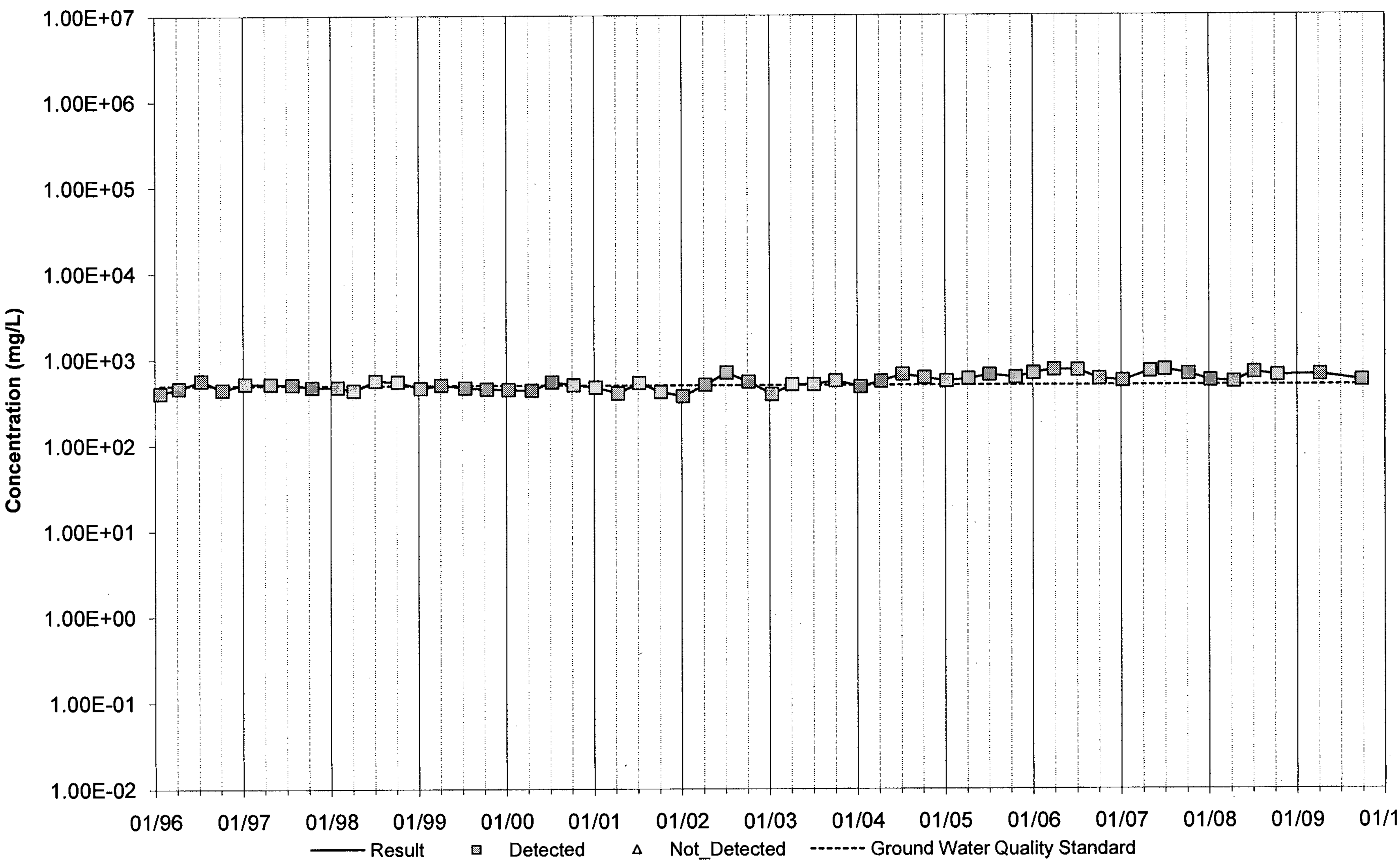
Monitoring Well: RCRA-D15
TDS (Solids, Total Dissolved)
Log Scale Concentrations



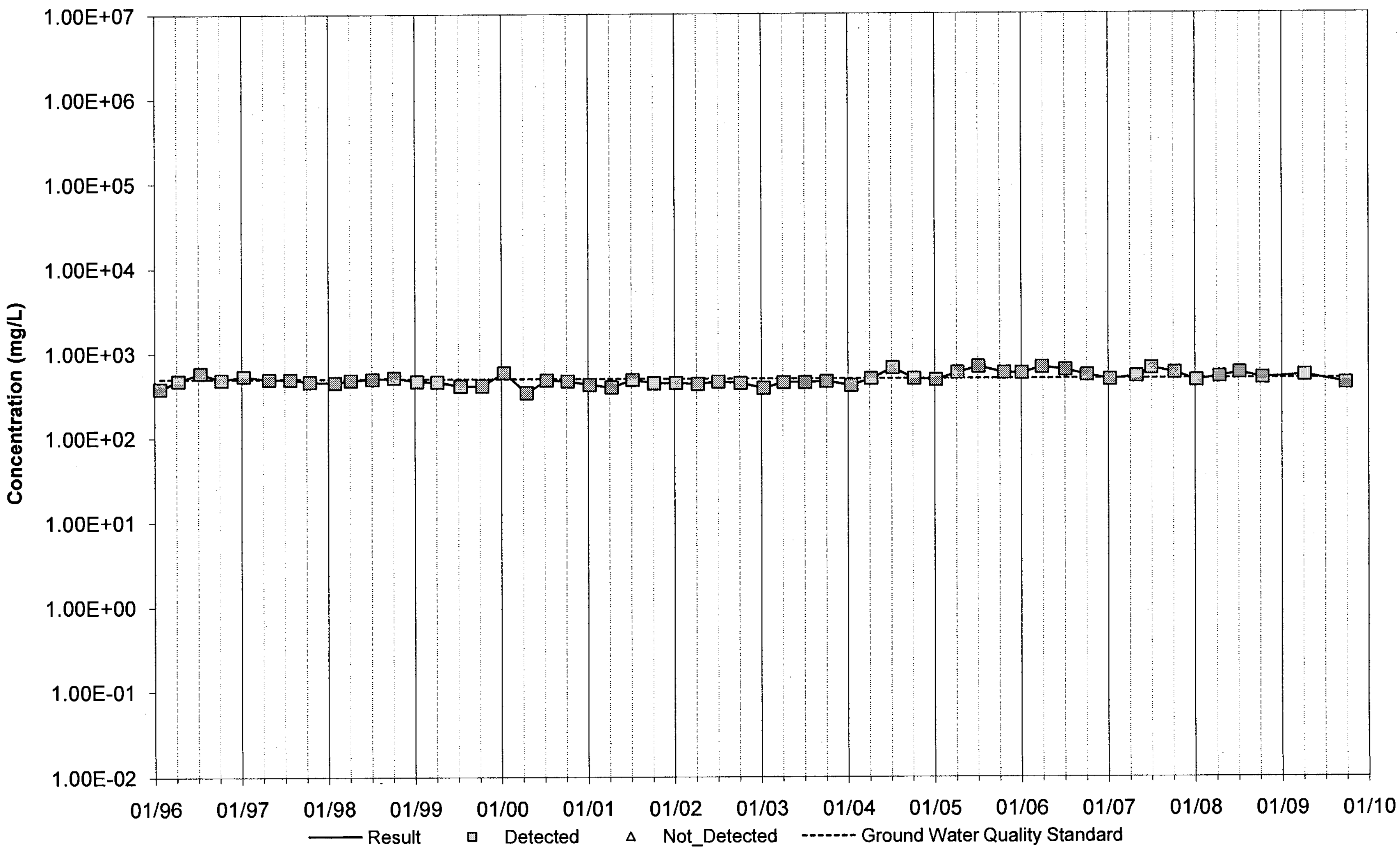


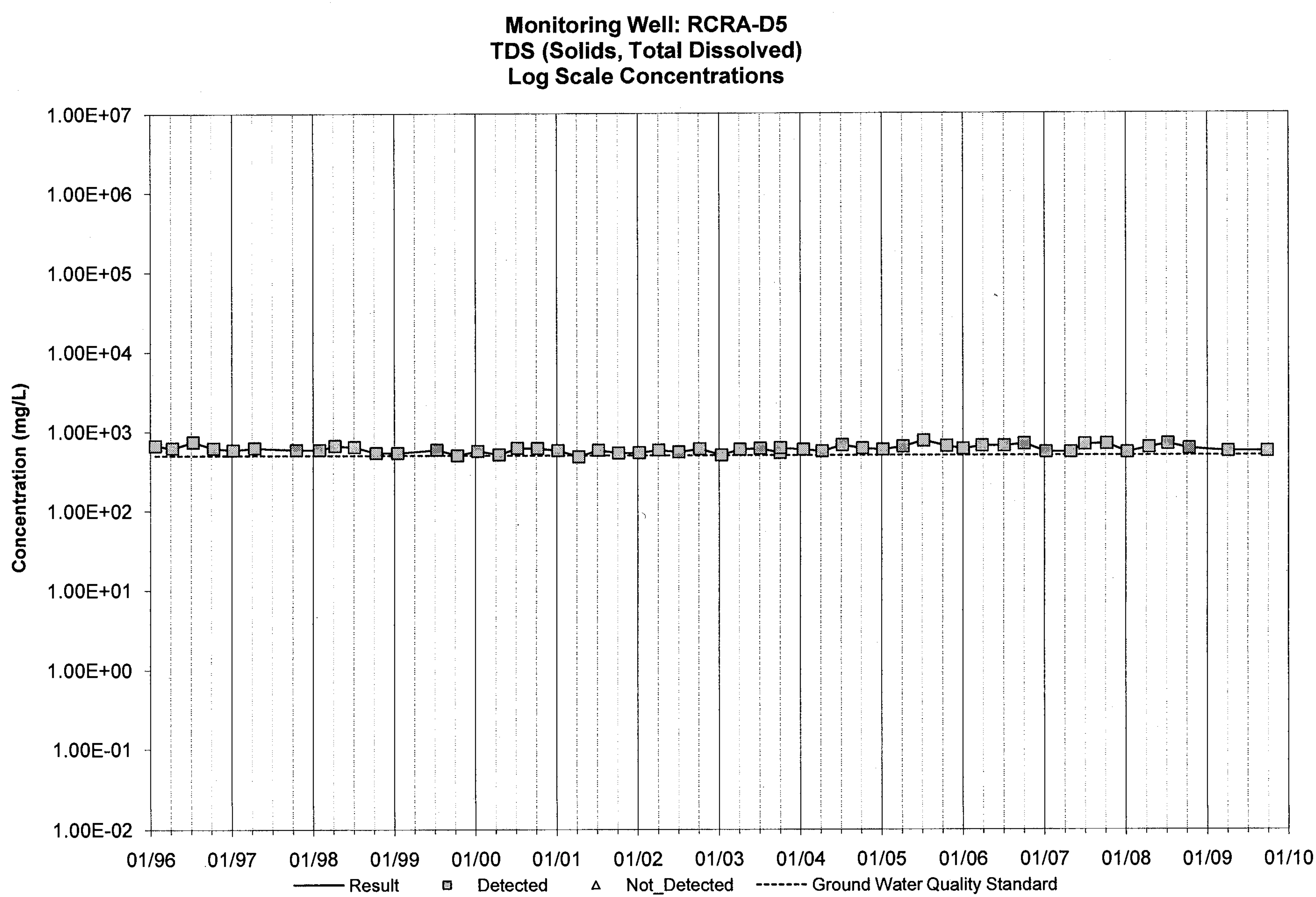
Monitoring Well: RCRA-D2
TDS (Solids, Total Dissolved)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D3
TDS (Solids, Total Dissolved)
Log Scale Concentrations

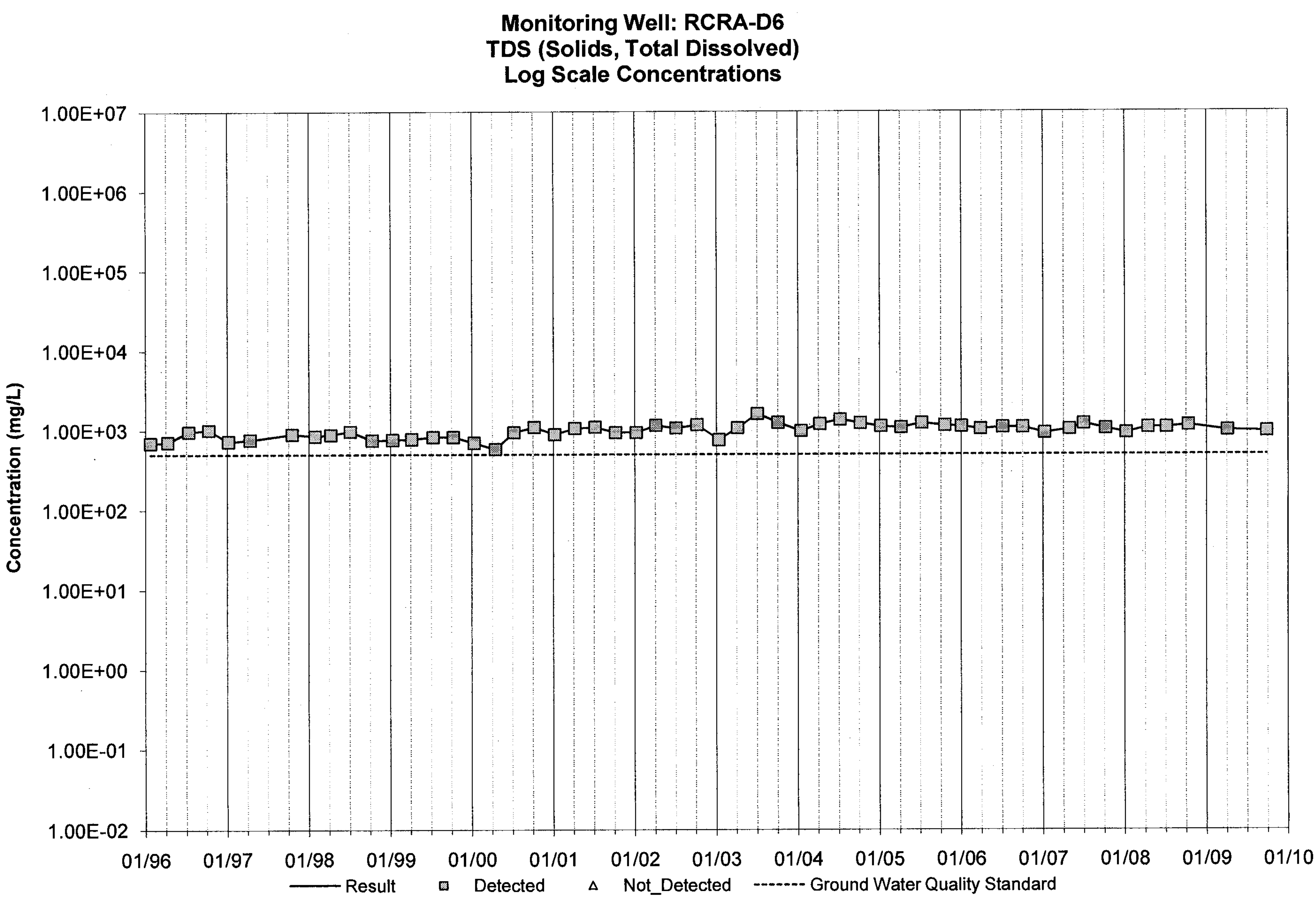


Monitoring Well: RCRA-D4
TDS (Solids, Total Dissolved)
Log Scale Concentrations

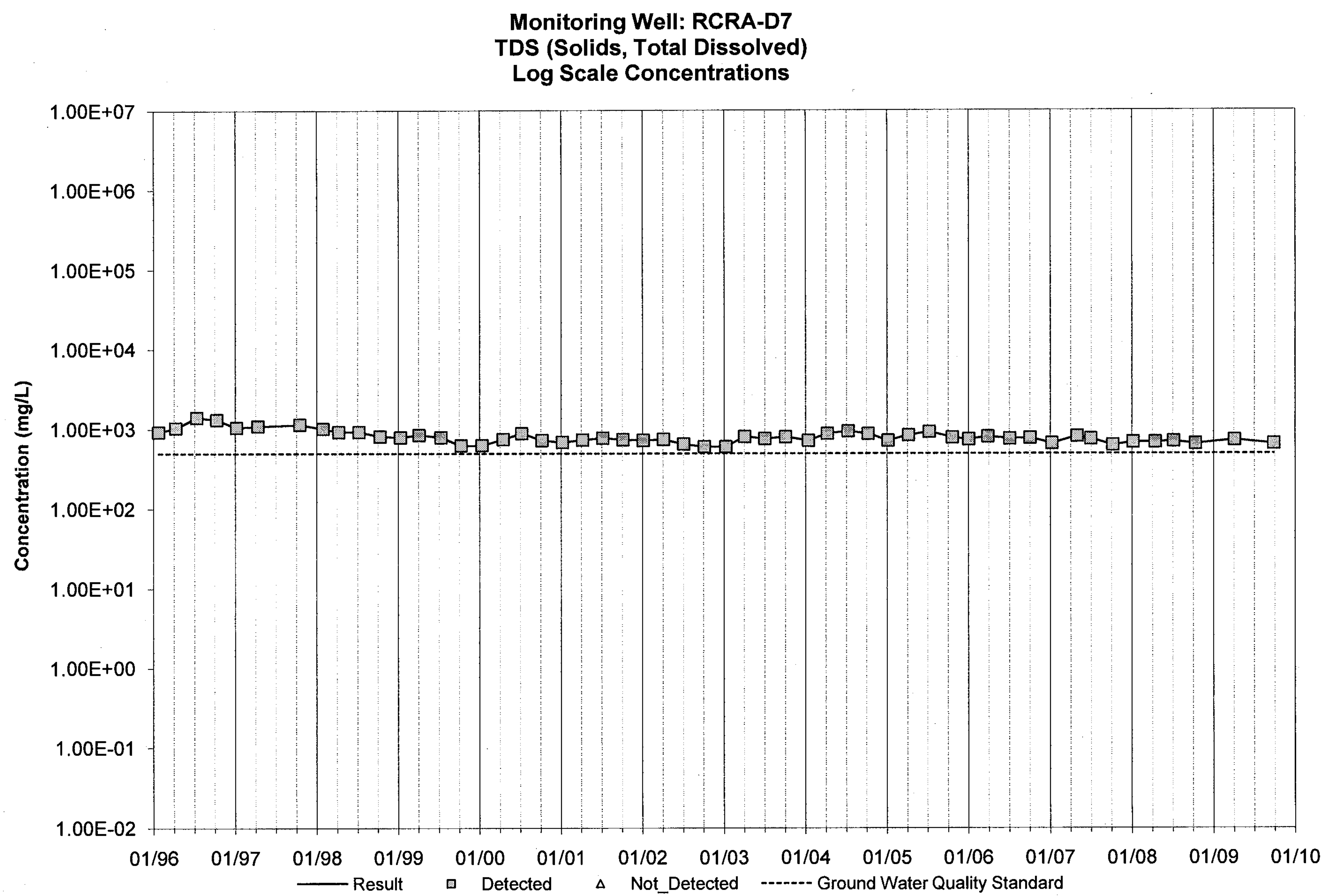




Monitoring Well: RCRA-D5
TDS (Solids, Total Dissolved)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

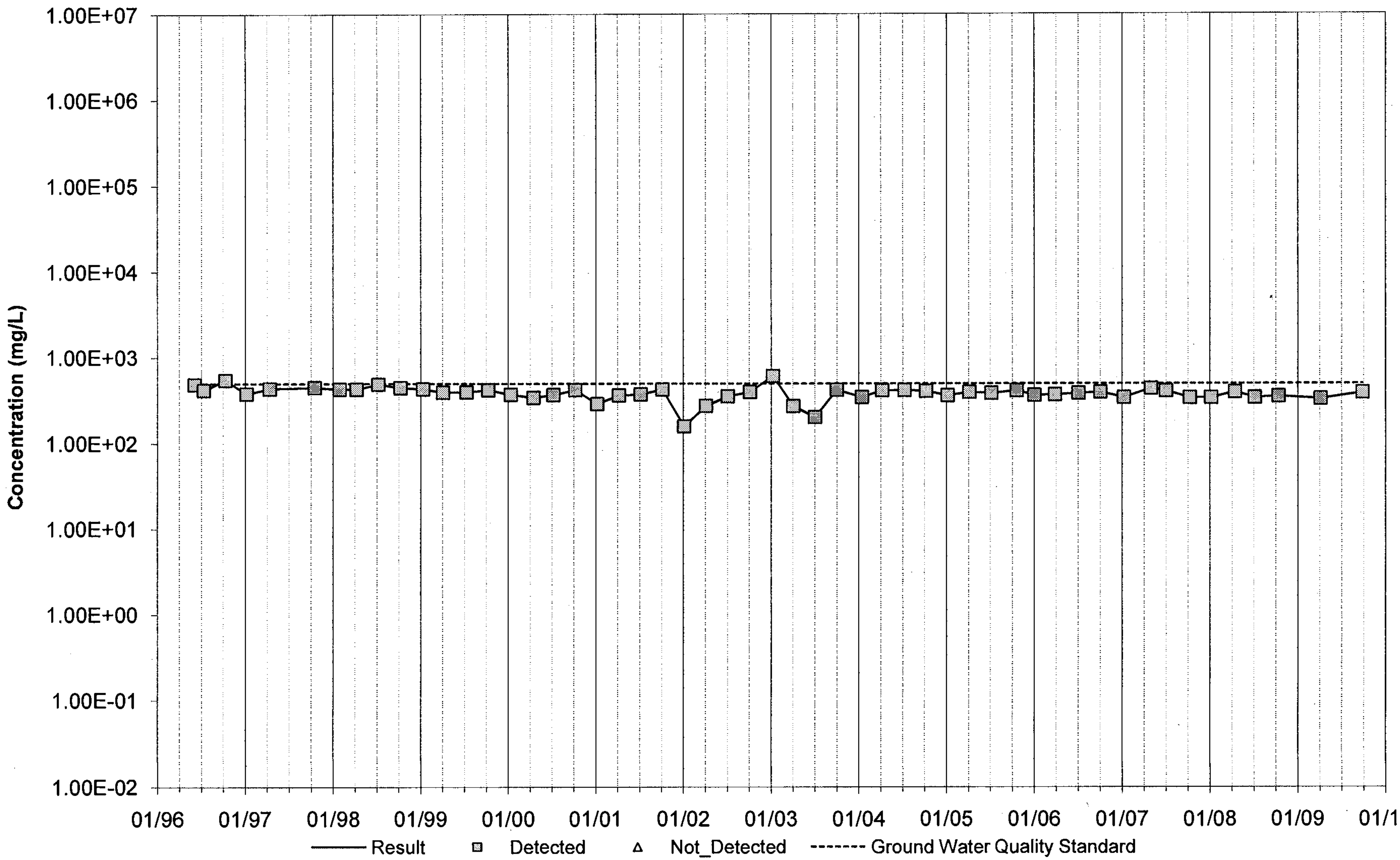


Monitoring Well: RCRA-D6
TDS (Solids, Total Dissolved)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

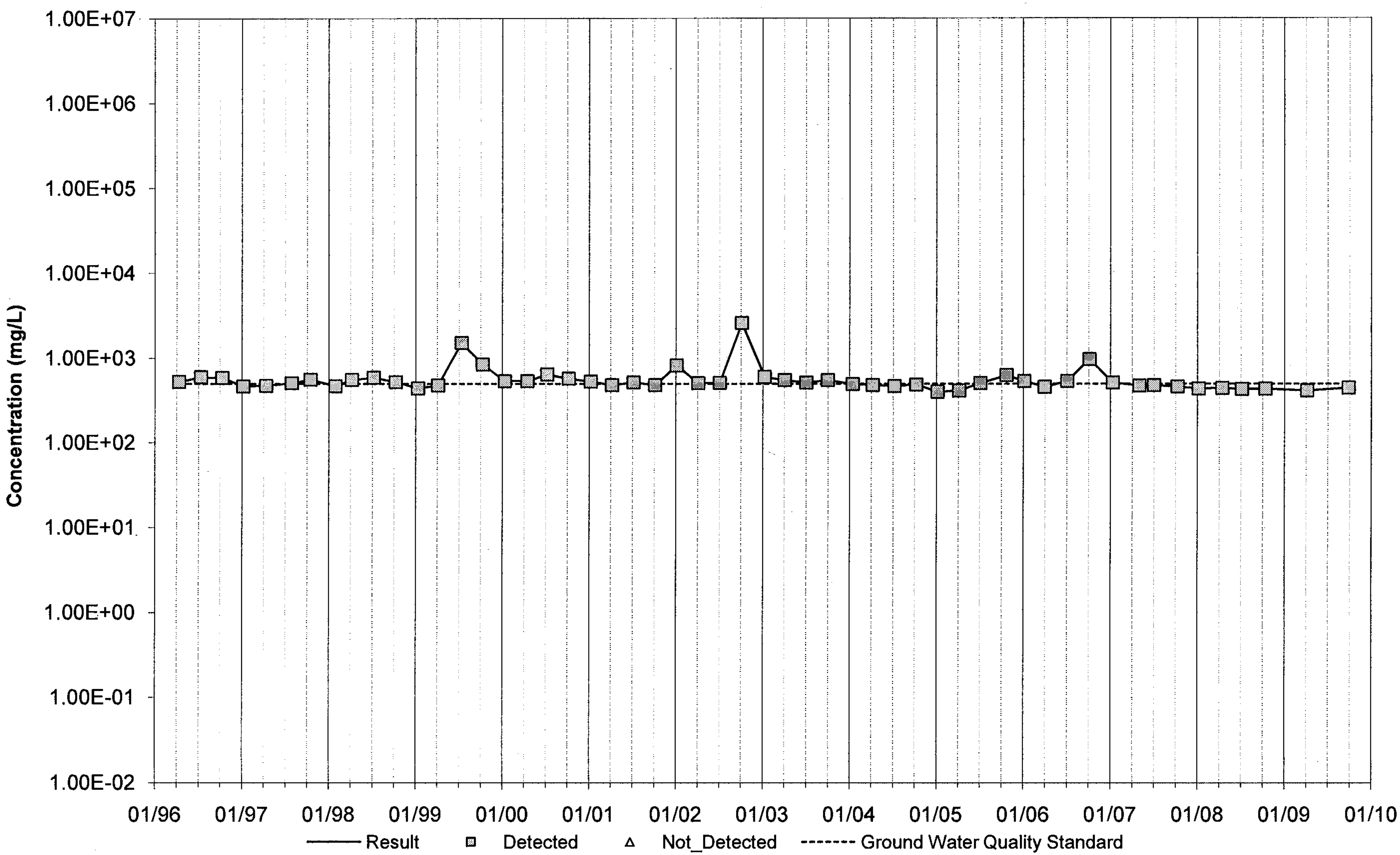


Monitoring Well: RCRA-D7
TDS (Solids, Total Dissolved)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

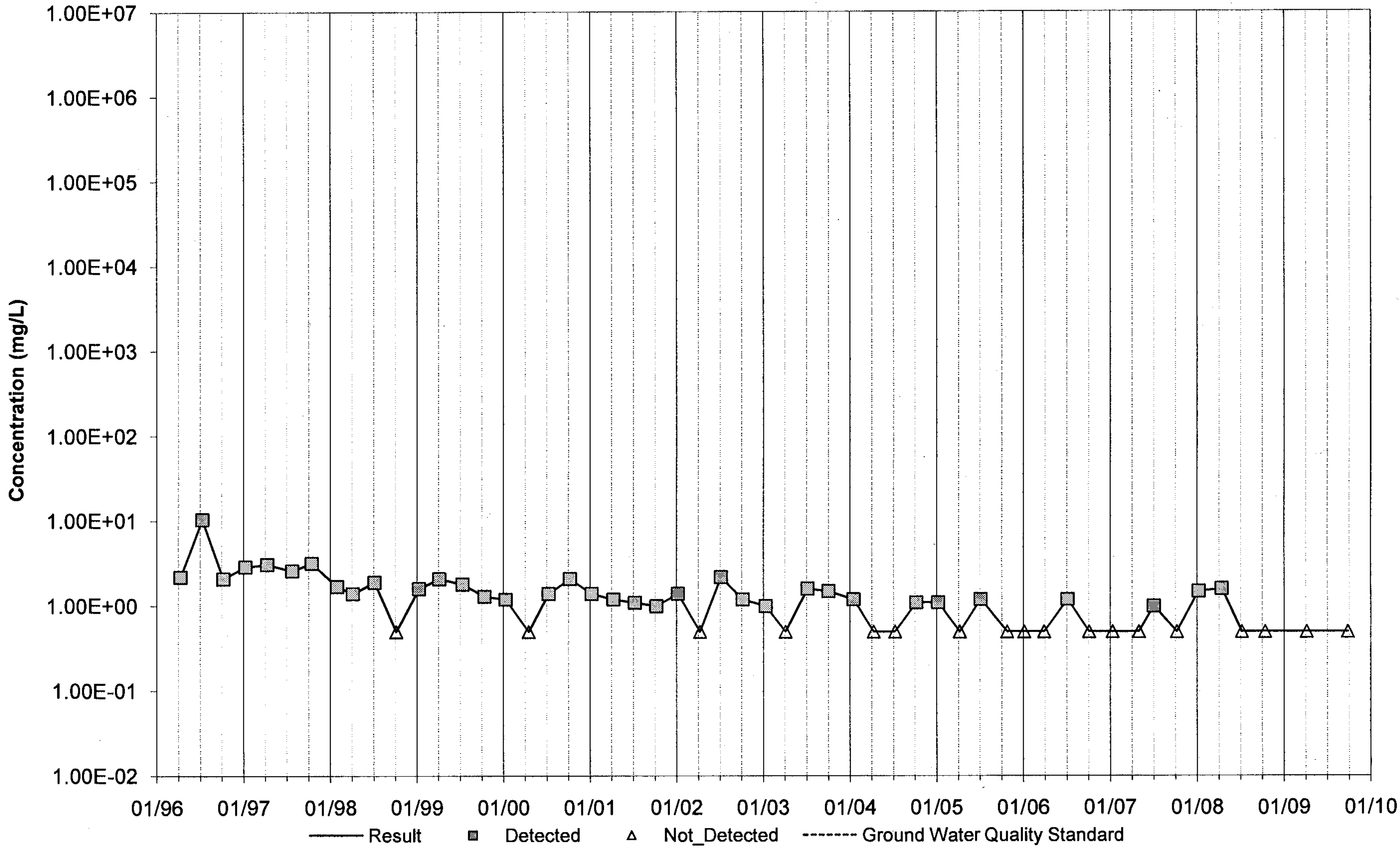
Monitoring Well: RCRA-D8
TDS (Solids, Total Dissolved)
Log Scale Concentrations



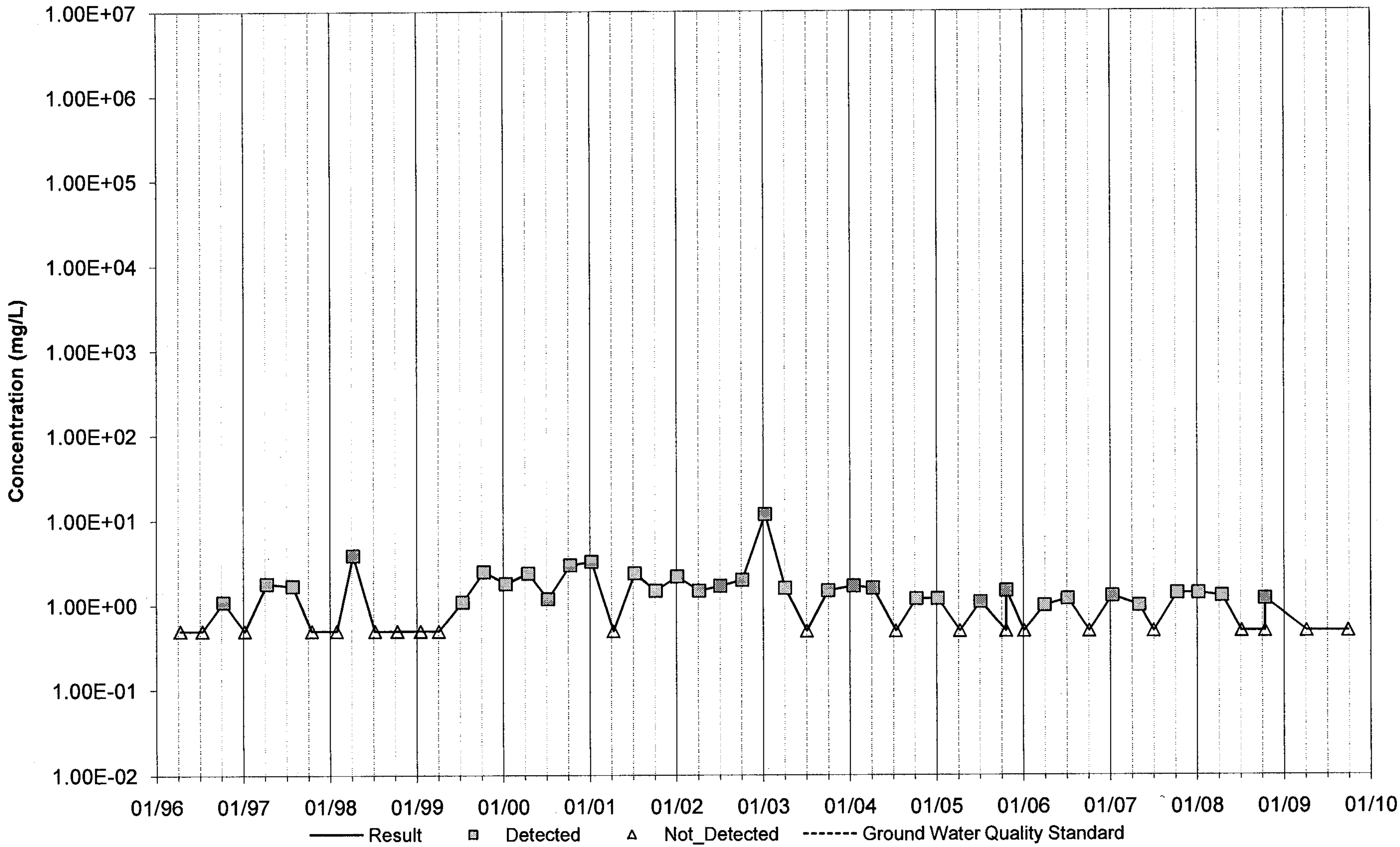
Monitoring Well: RCRA-D9
TDS (Solids, Total Dissolved)
Log Scale Concentrations

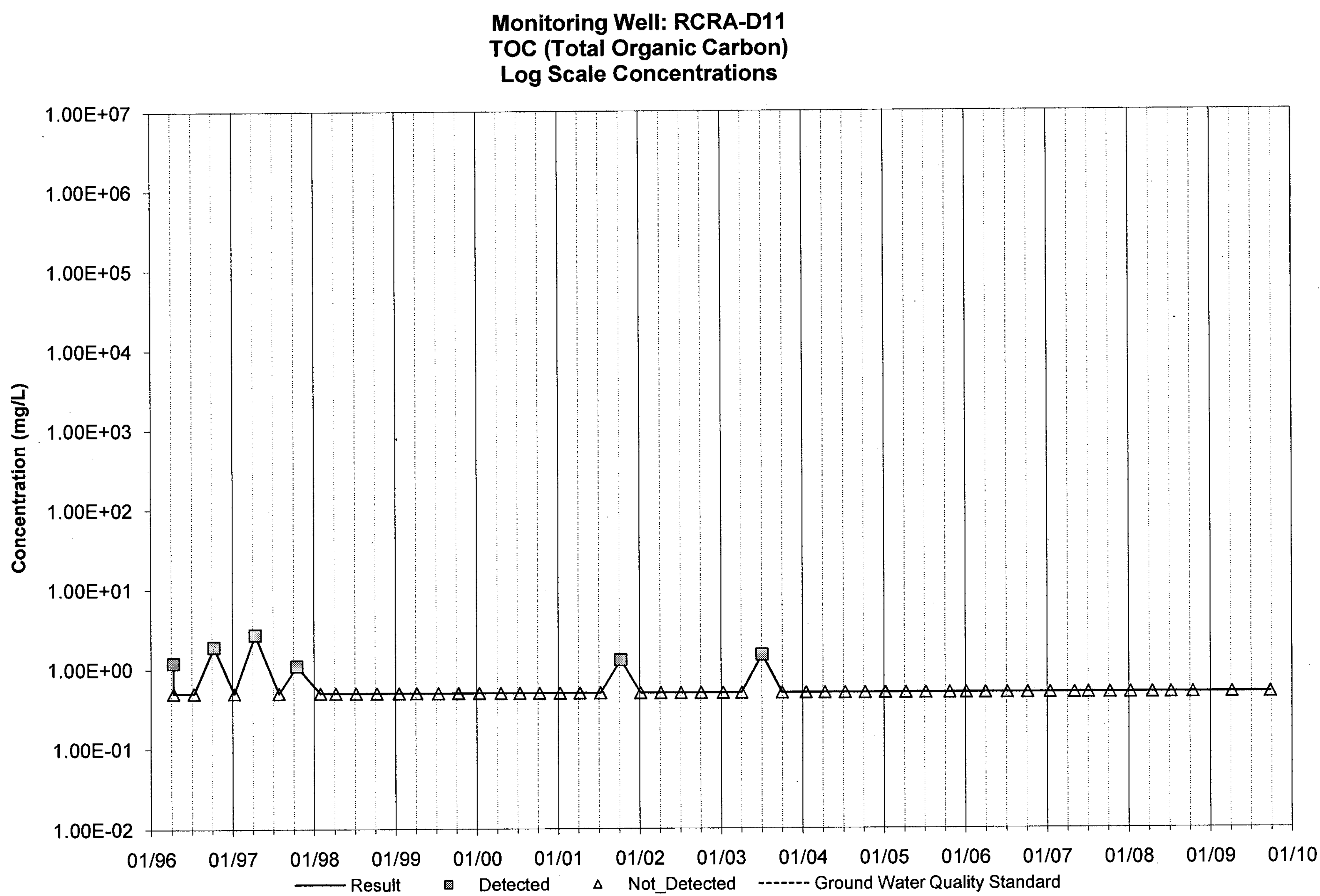


Monitoring Well: RCRA-D1
TOC (Total Organic Carbon)
Log Scale Concentrations



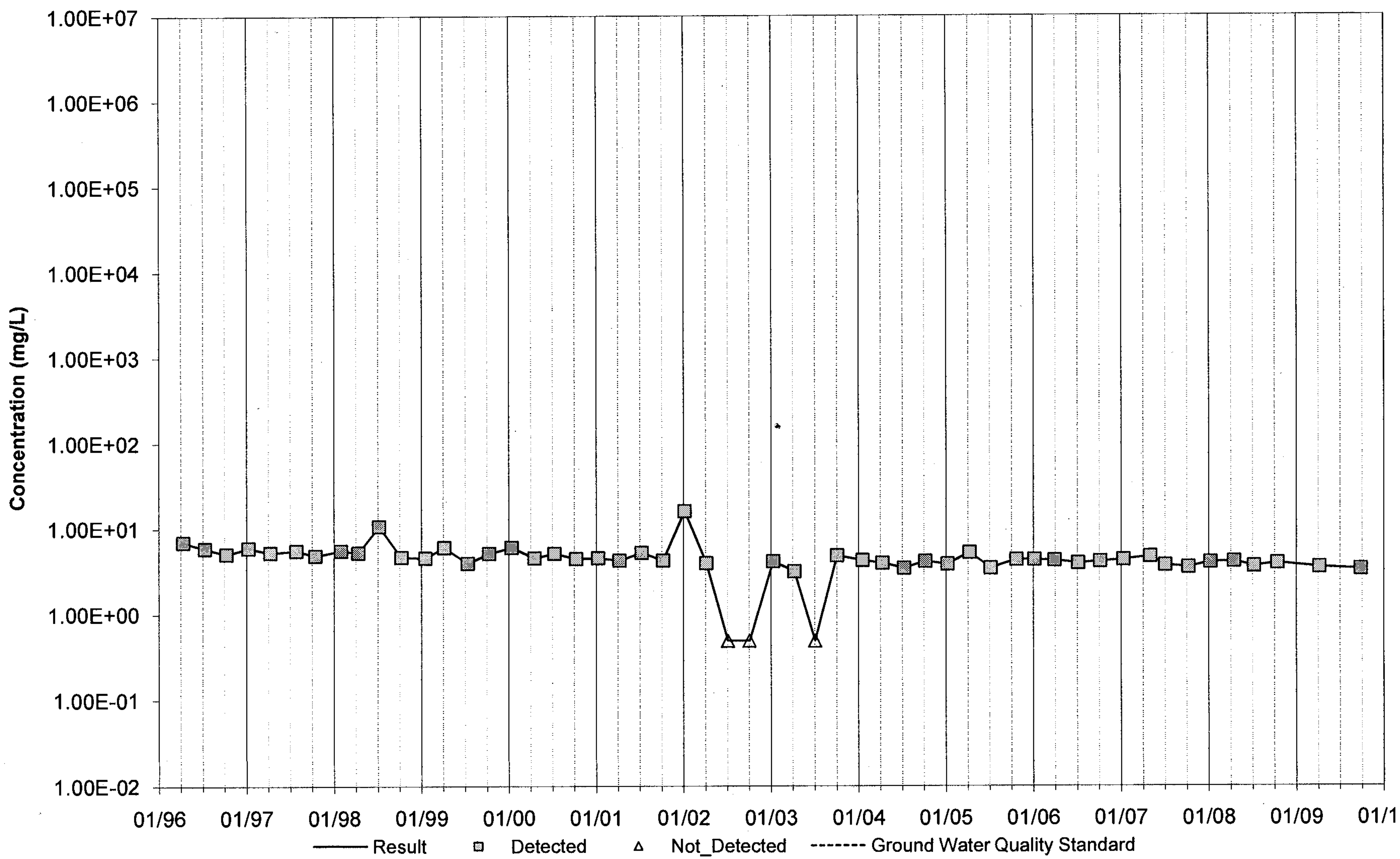
Monitoring Well: RCRA-D10
TOC (Total Organic Carbon)
Log Scale Concentrations



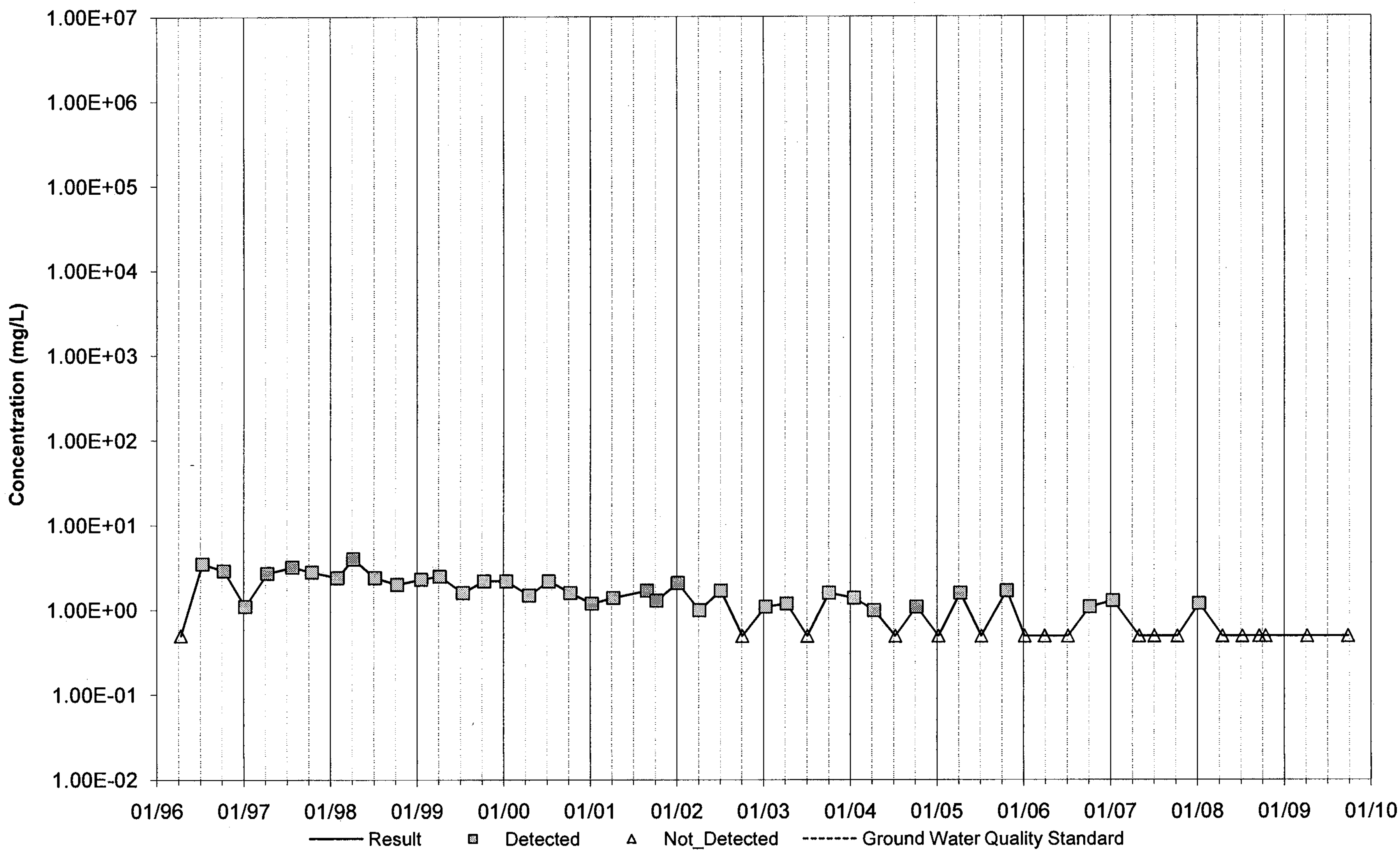


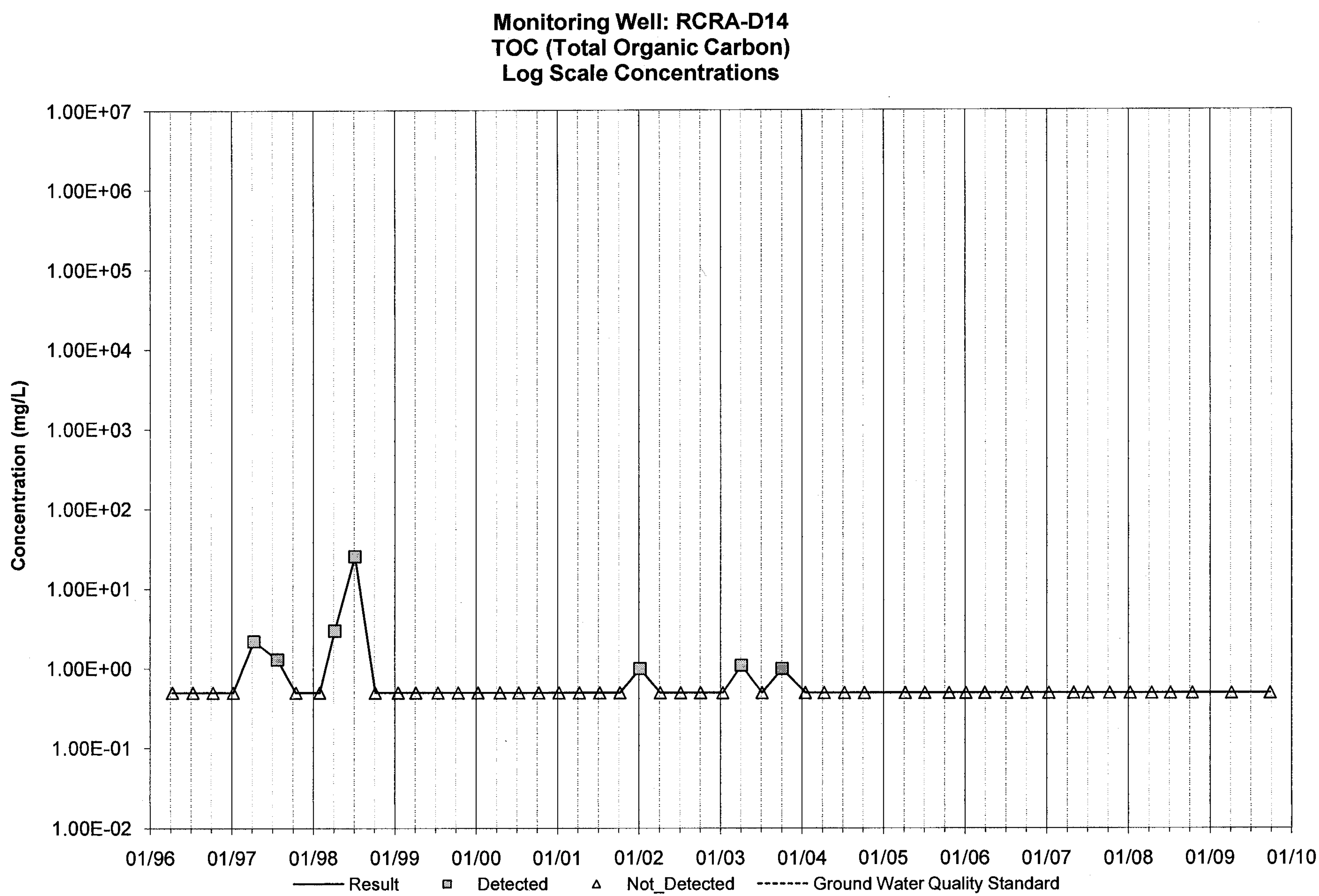
Monitoring Well: RCRA-D11
TOC (Total Organic Carbon)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D12
TOC (Total Organic Carbon)
Log Scale Concentrations



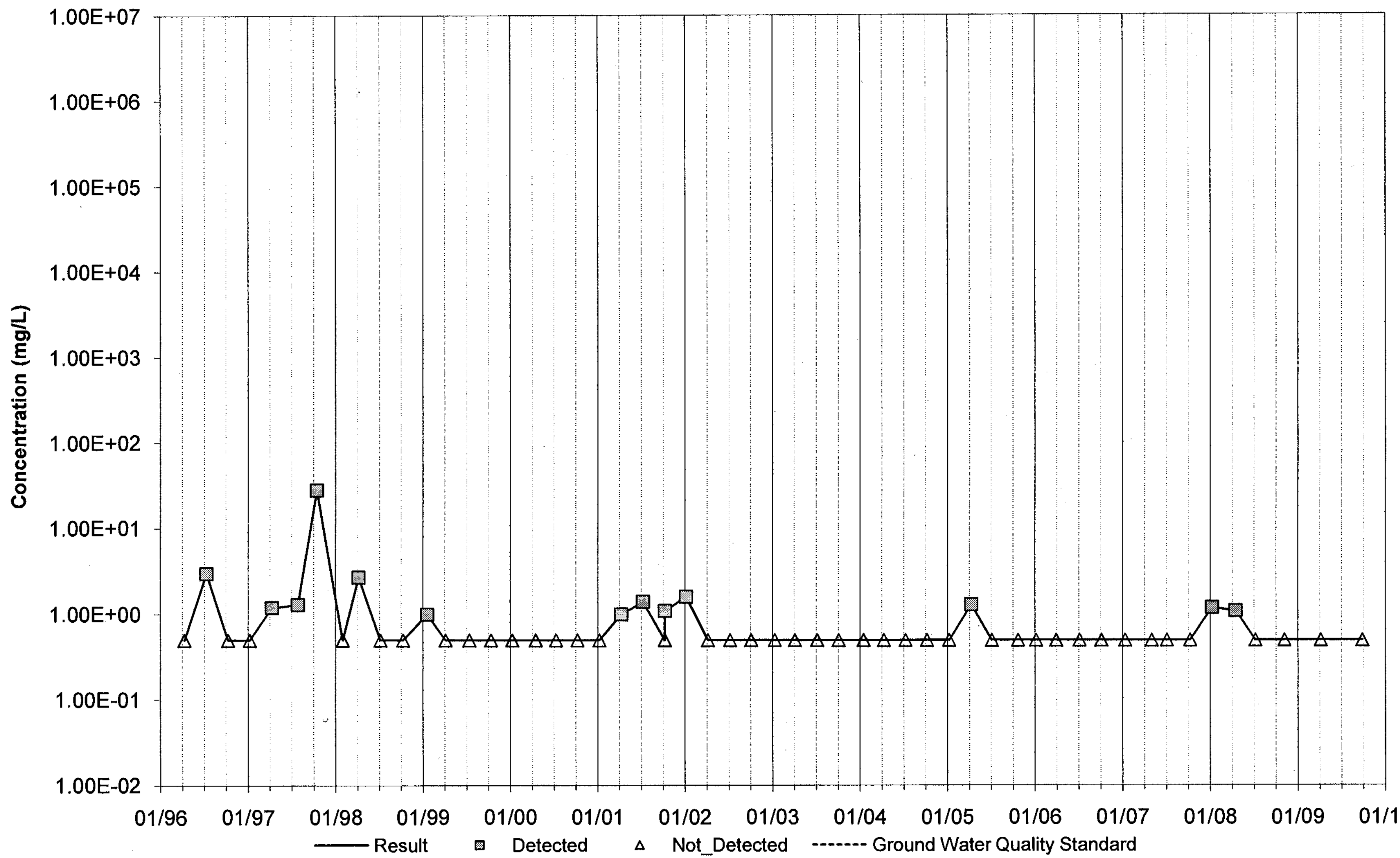
Monitoring Well: RCRA-D13
TOC (Total Organic Carbon)
Log Scale Concentrations



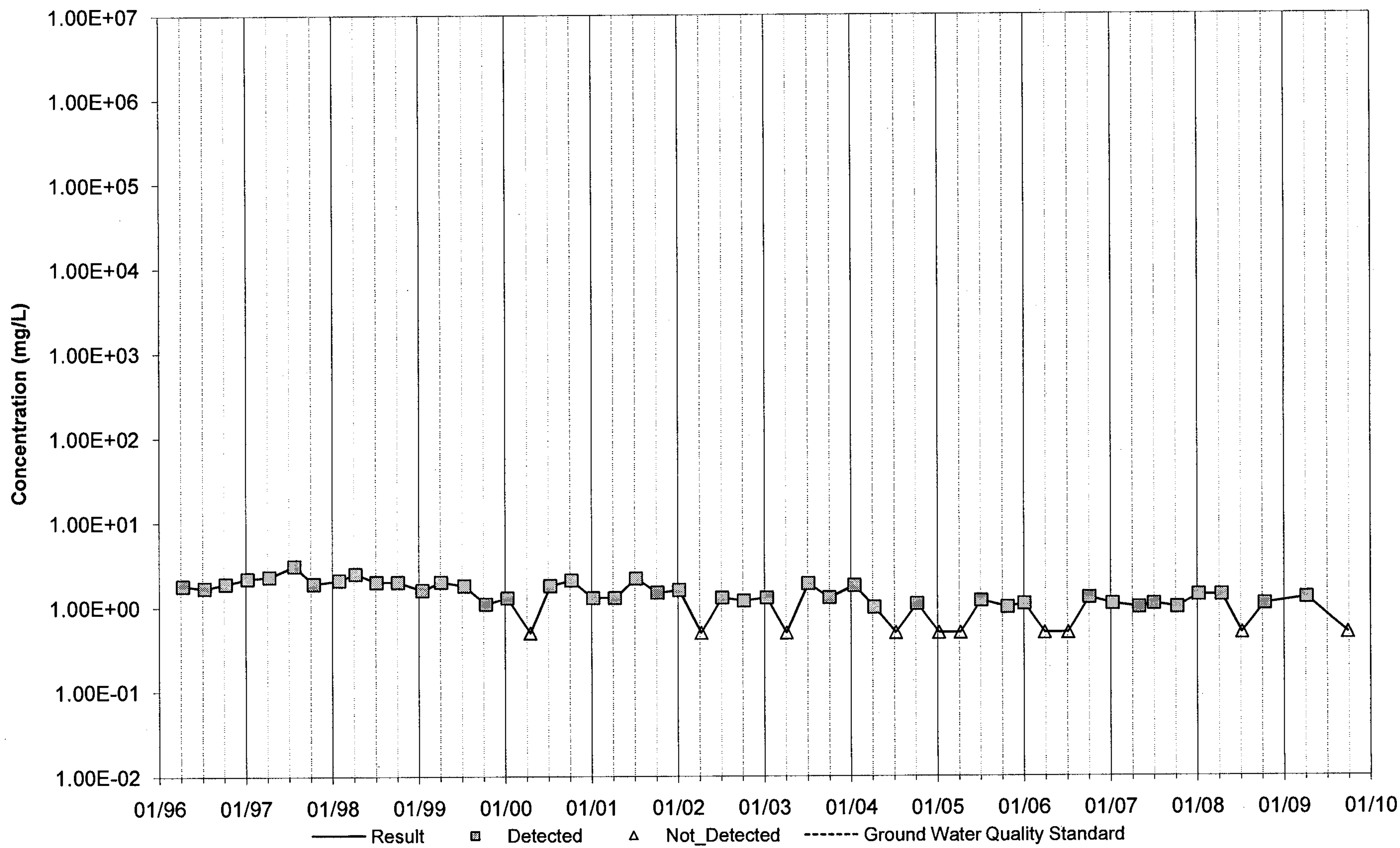


Monitoring Well: RCRA-D14
TOC (Total Organic Carbon)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

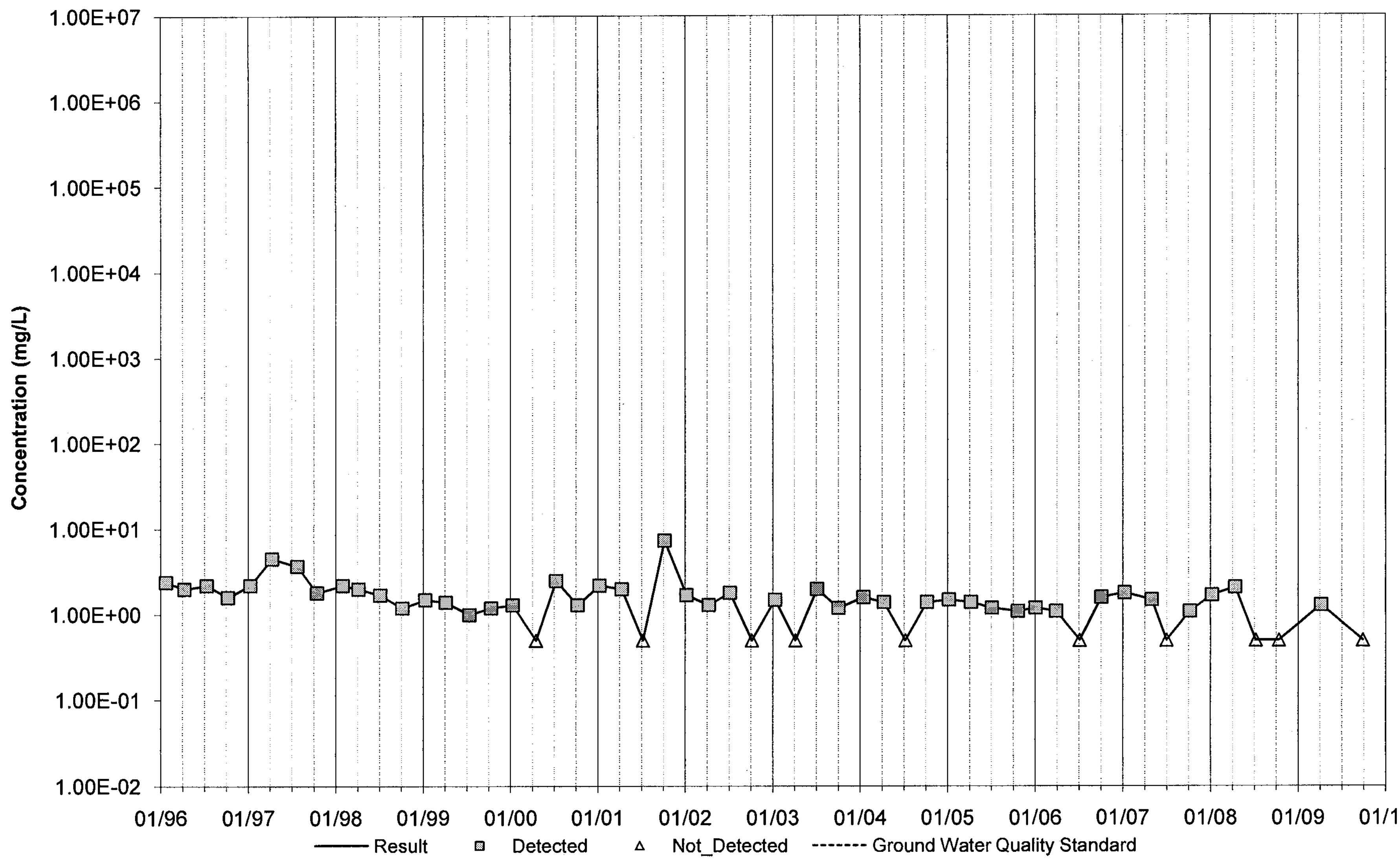
Monitoring Well: RCRA-D15
TOC (Total Organic Carbon)
Log Scale Concentrations



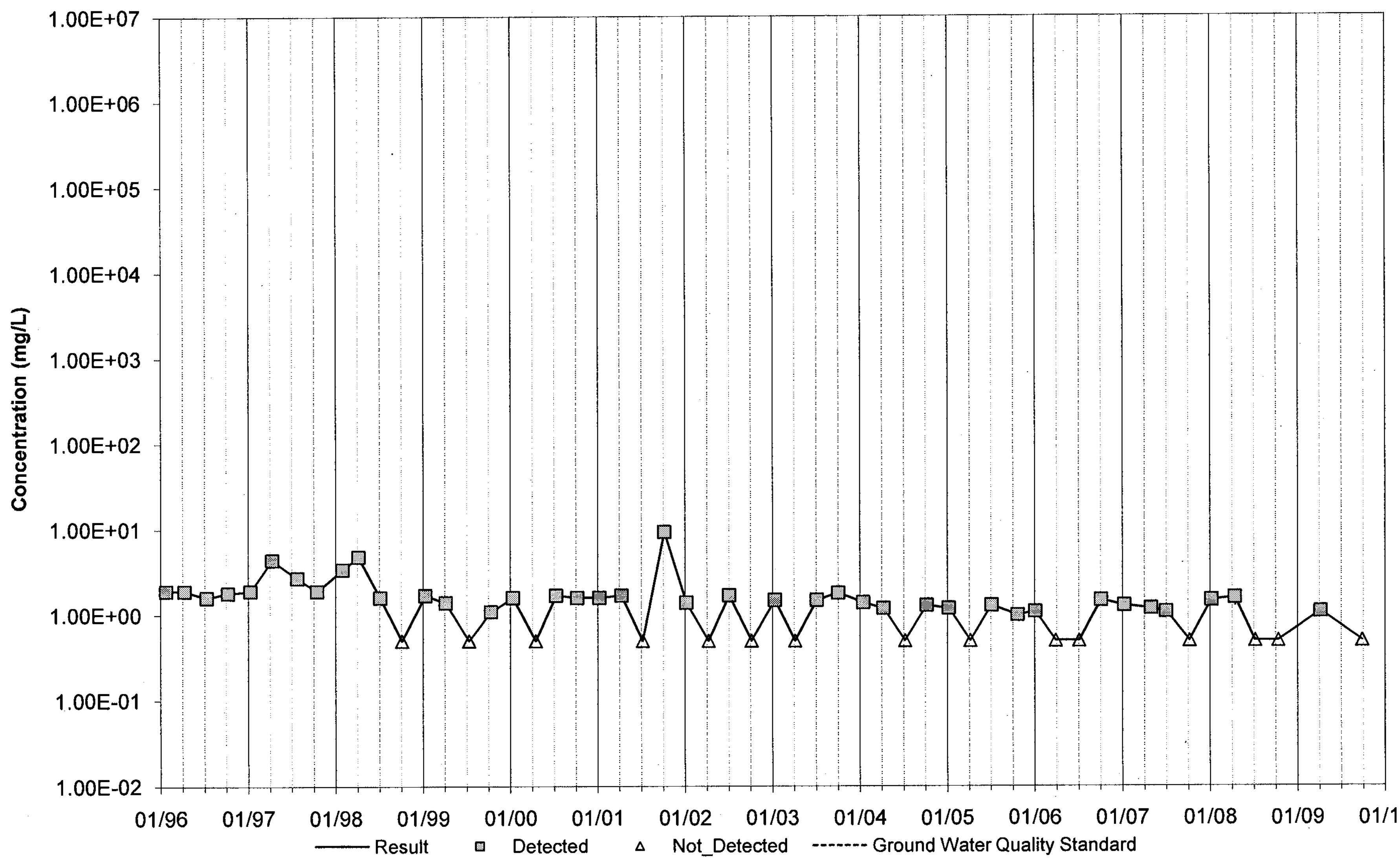
Monitoring Well: RCRA-D2
TOC (Total Organic Carbon)
Log Scale Concentrations

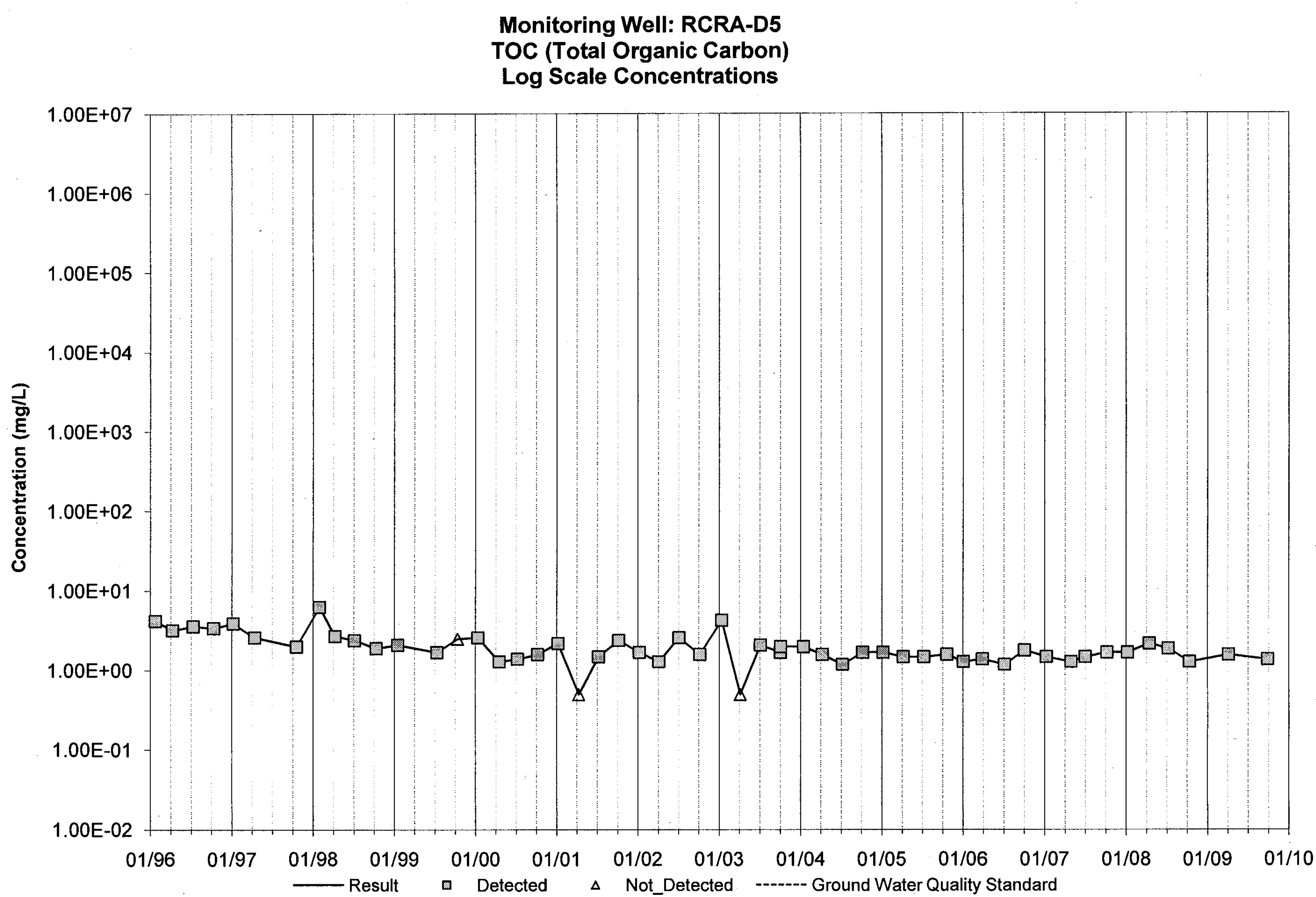


Monitoring Well: RCRA-D3
TOC (Total Organic Carbon)
Log Scale Concentrations



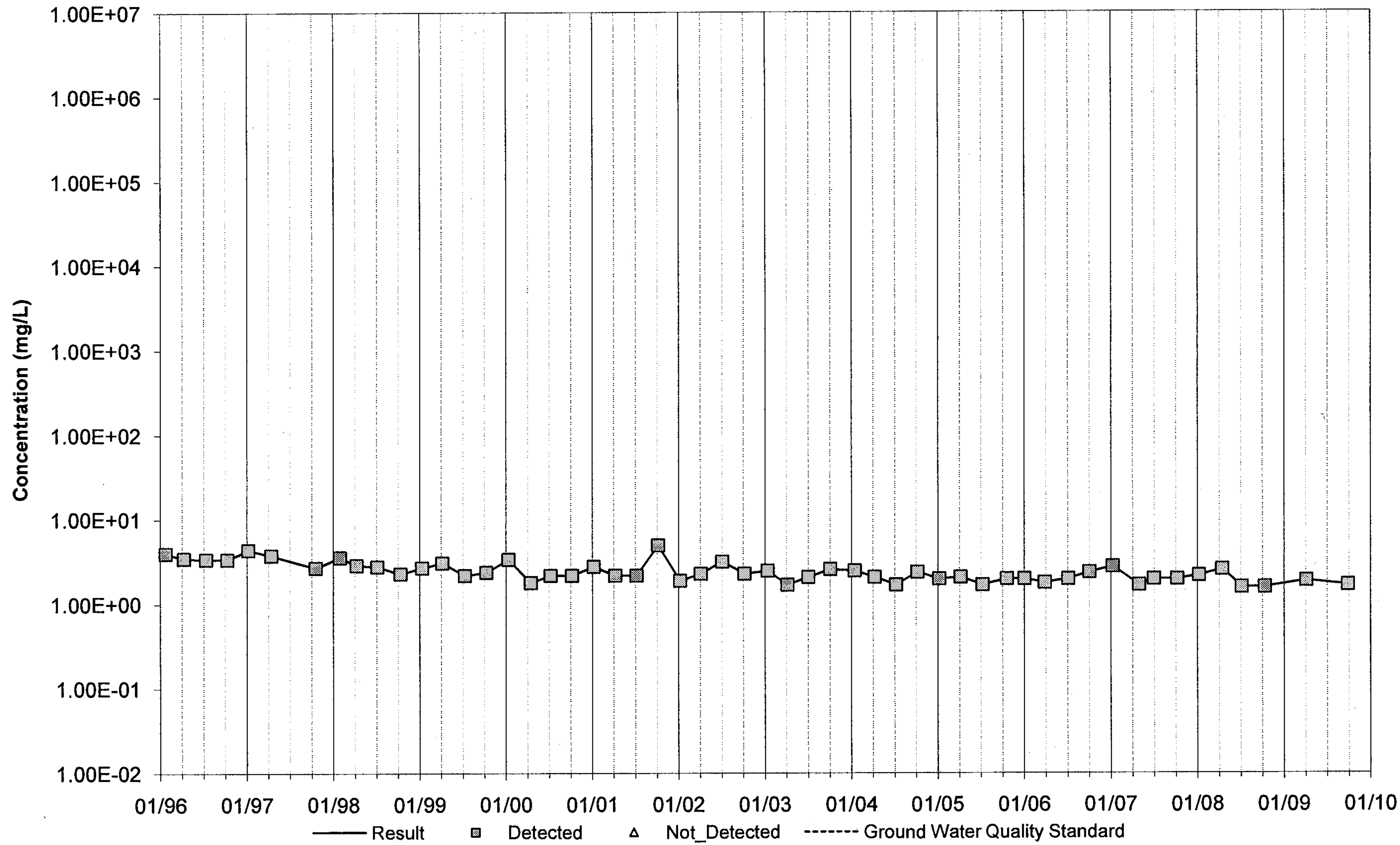
Monitoring Well: RCRA-D4
TOC (Total Organic Carbon)
Log Scale Concentrations

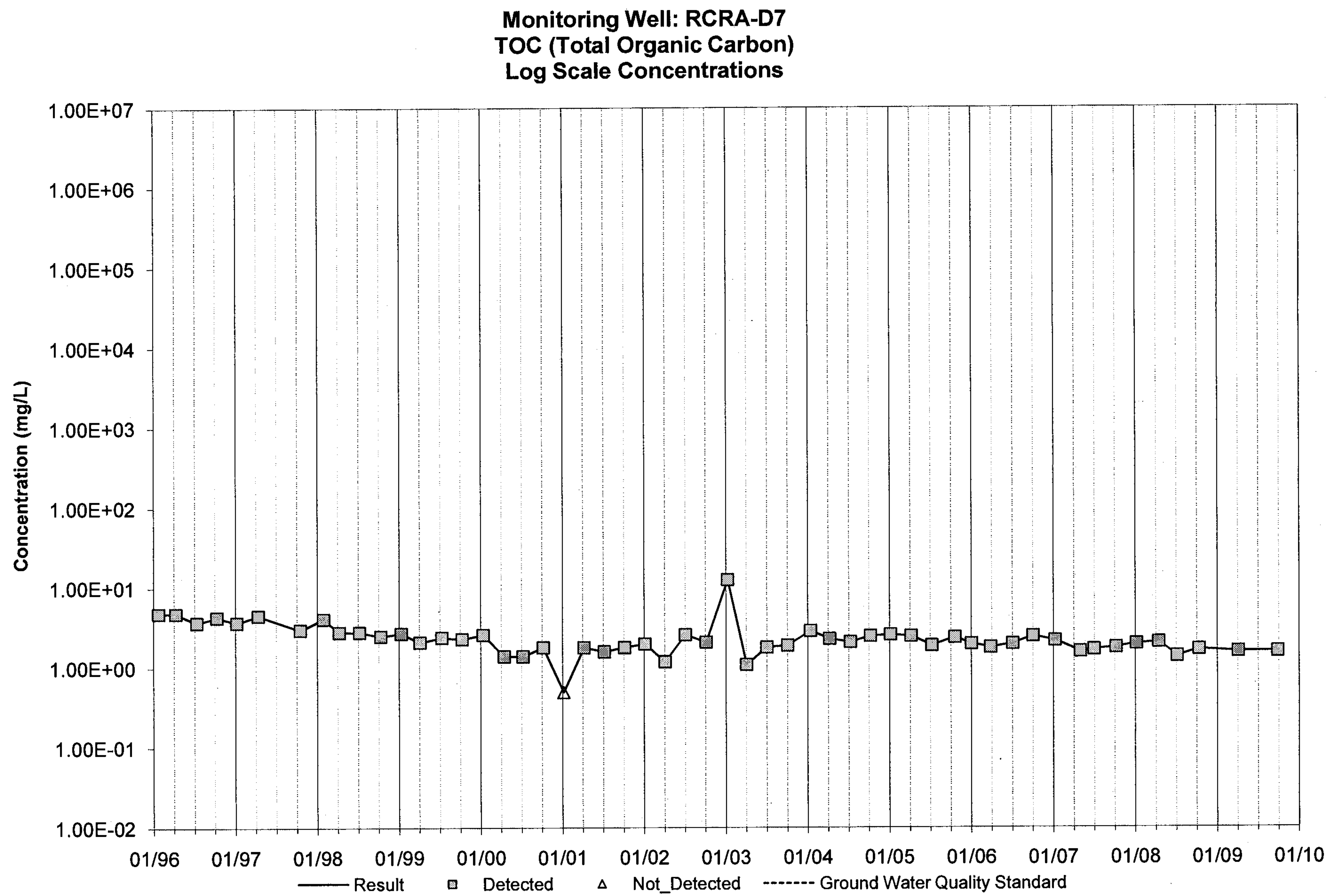


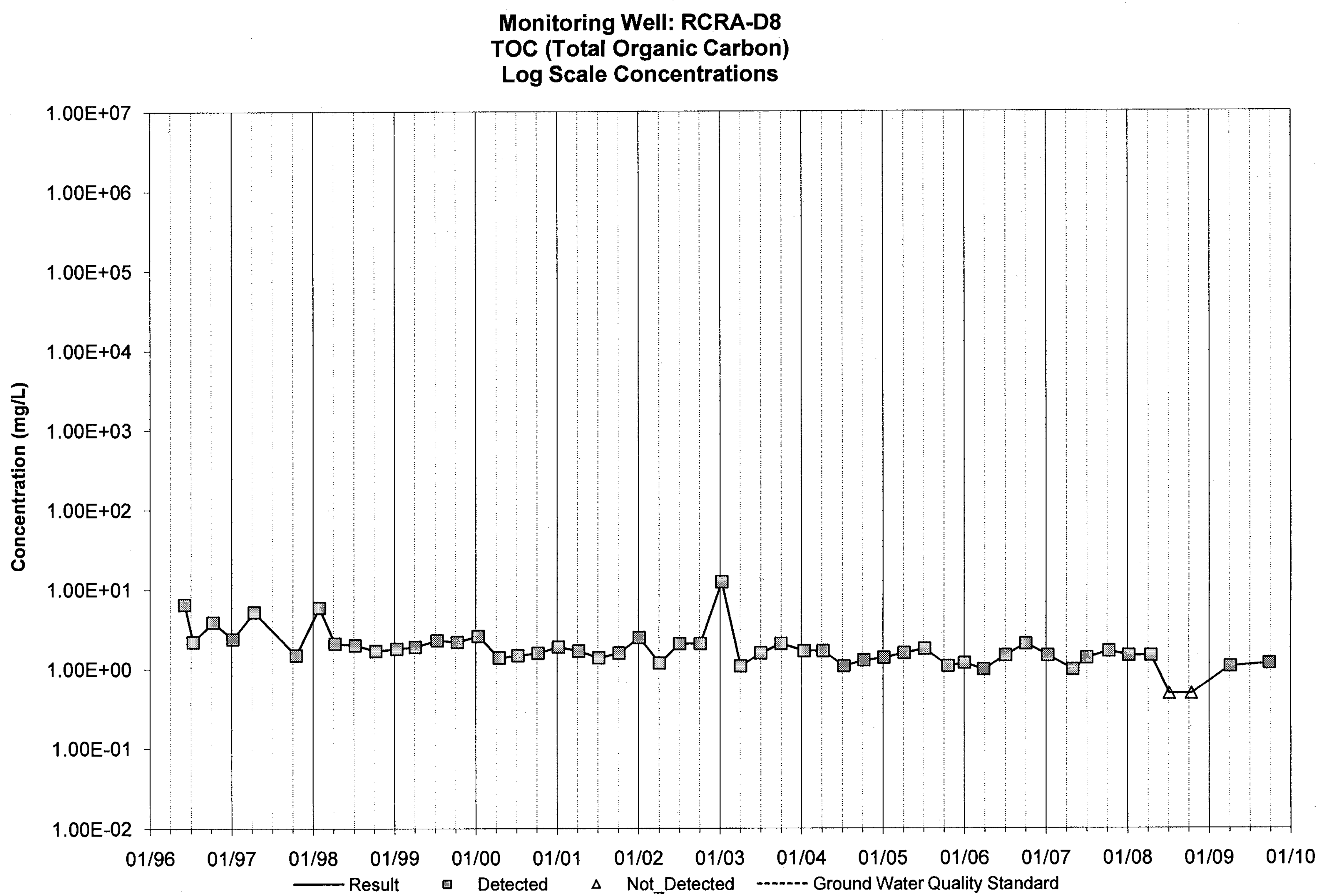


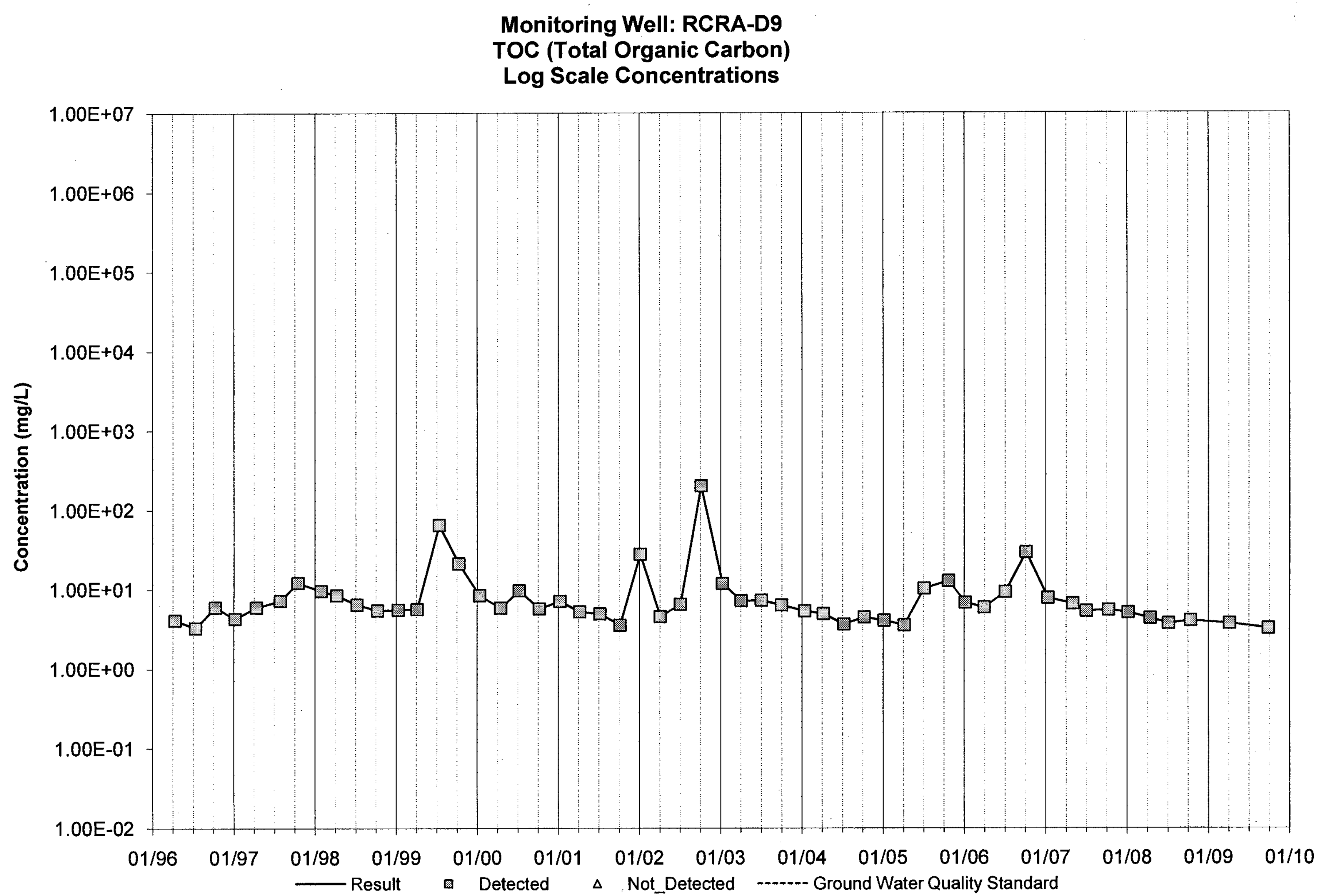
Monitoring Well: RCRA-D5
TOC (Total Organic Carbon)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D6
TOC (Total Organic Carbon)
Log Scale Concentrations



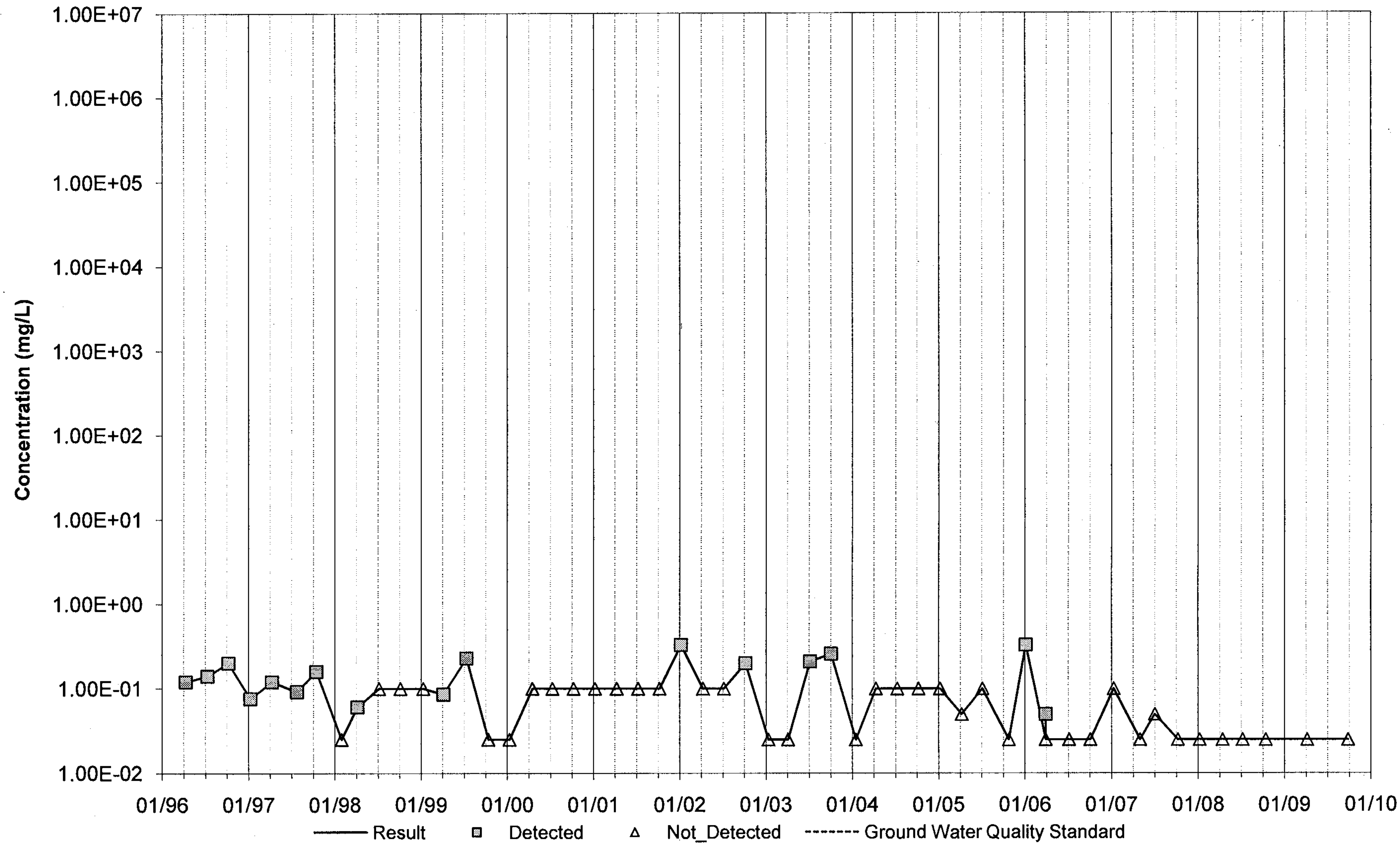

Monitoring Well: RCRA-D7
TOC (Total Organic Carbon)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
------- Ground Water Quality Standard


Monitoring Well: RCRA-D8
TOC (Total Organic Carbon)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

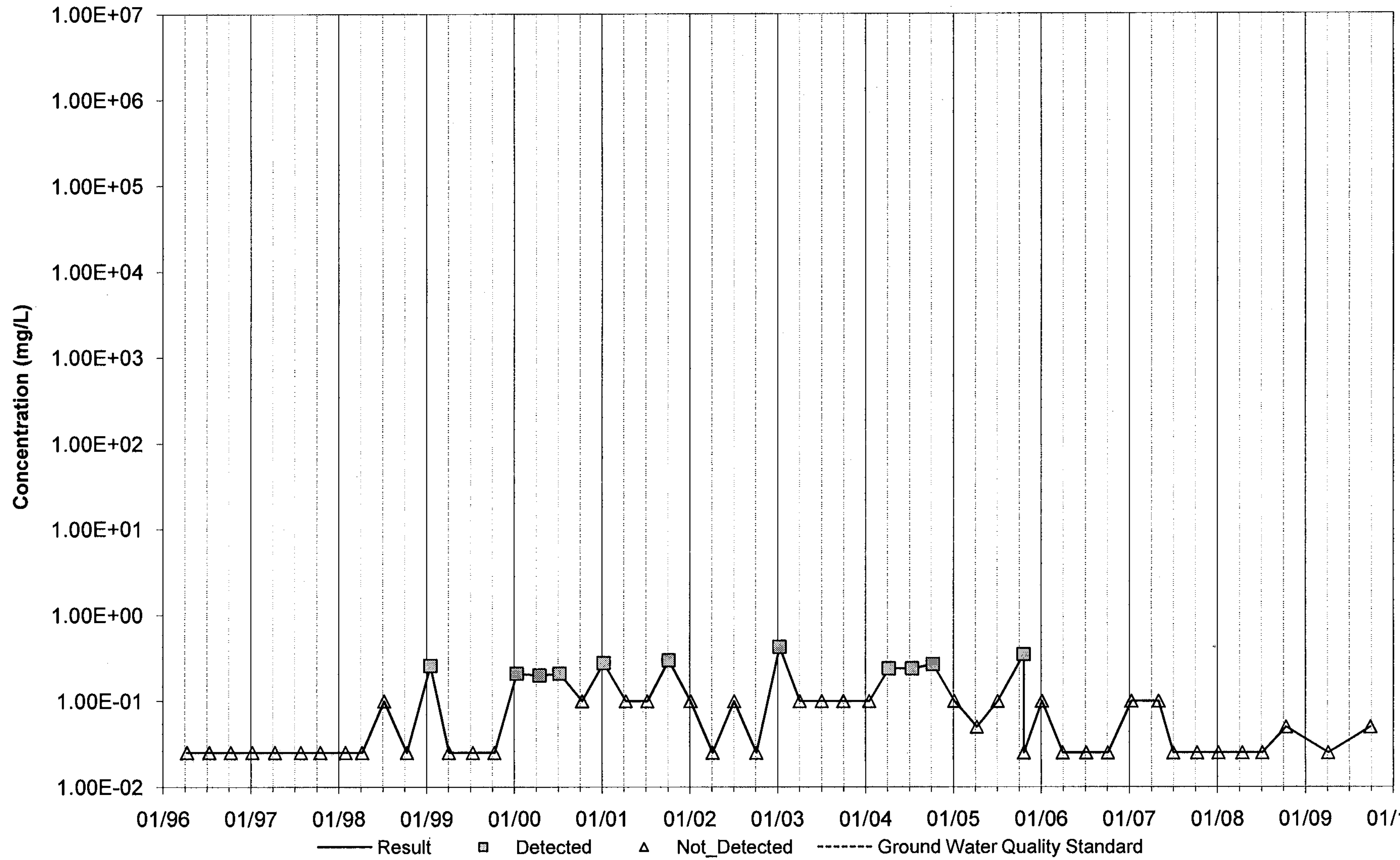


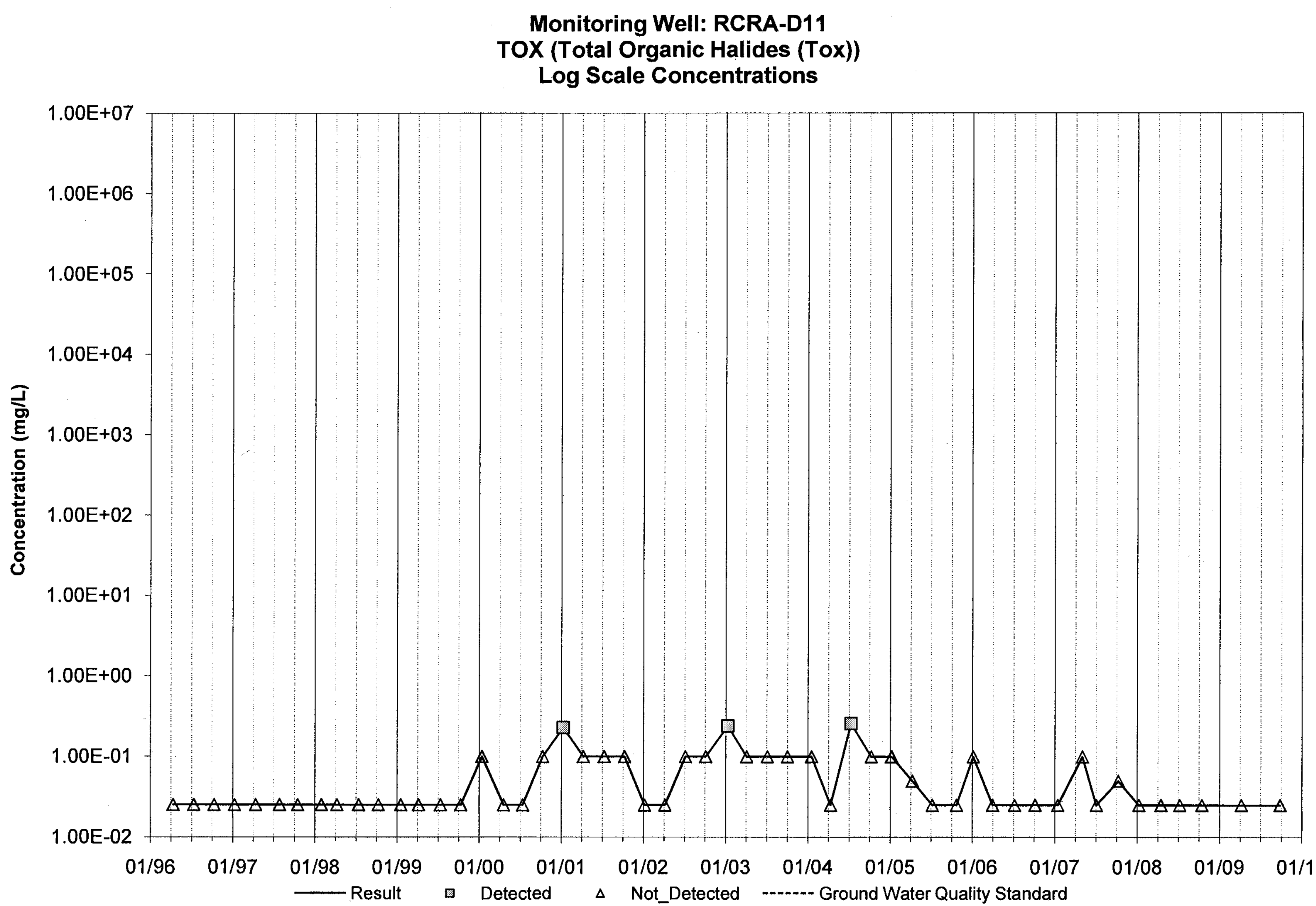
Monitoring Well: RCRA-D9
TOC (Total Organic Carbon)
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

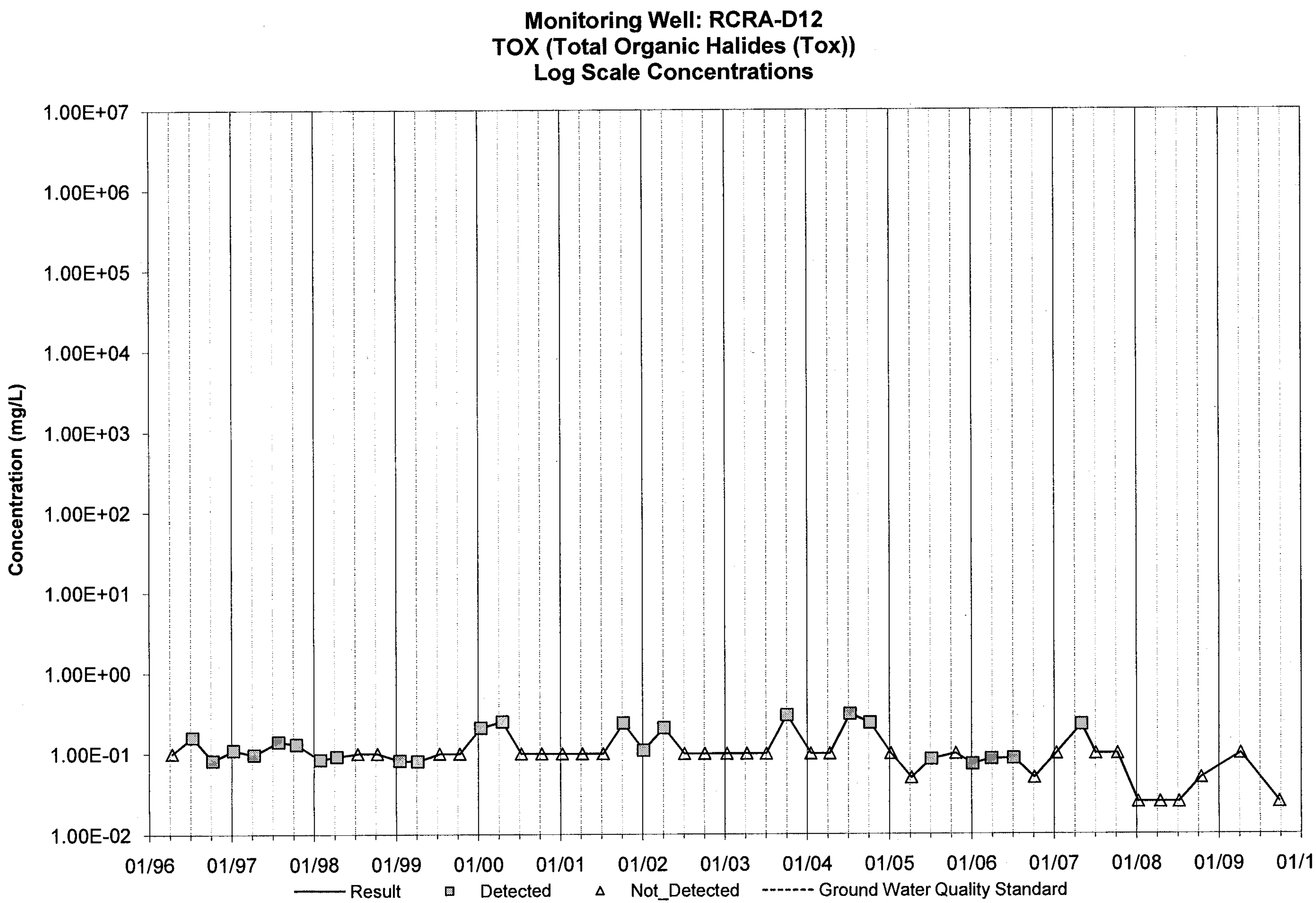
Monitoring Well: RCRA-D1
TOX (Total Organic Halides (Tox))
Log Scale Concentrations



Monitoring Well: RCRA-D10
TOX (Total Organic Halides (Tox))
Log Scale Concentrations

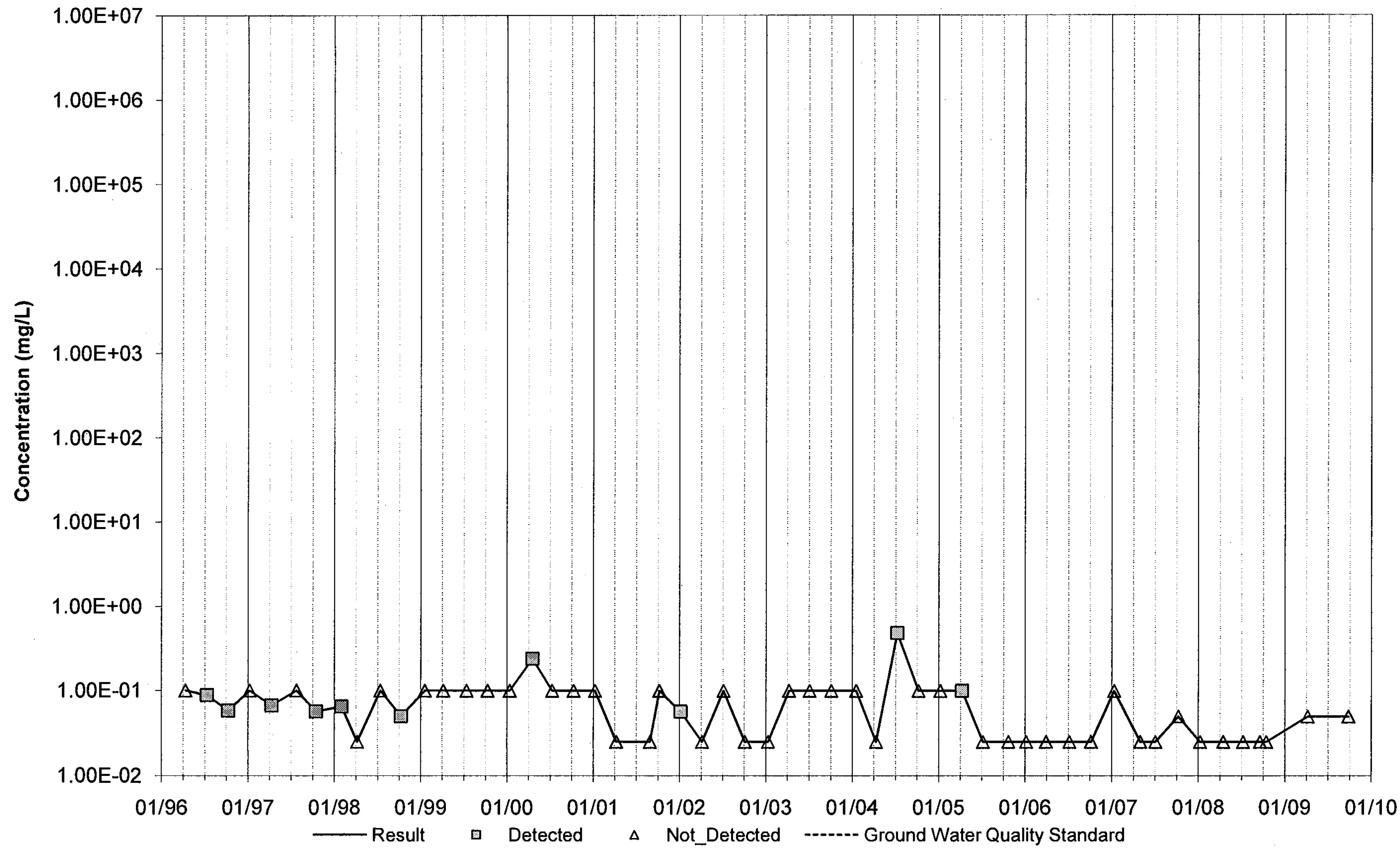



Monitoring Well: RCRA-D11
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

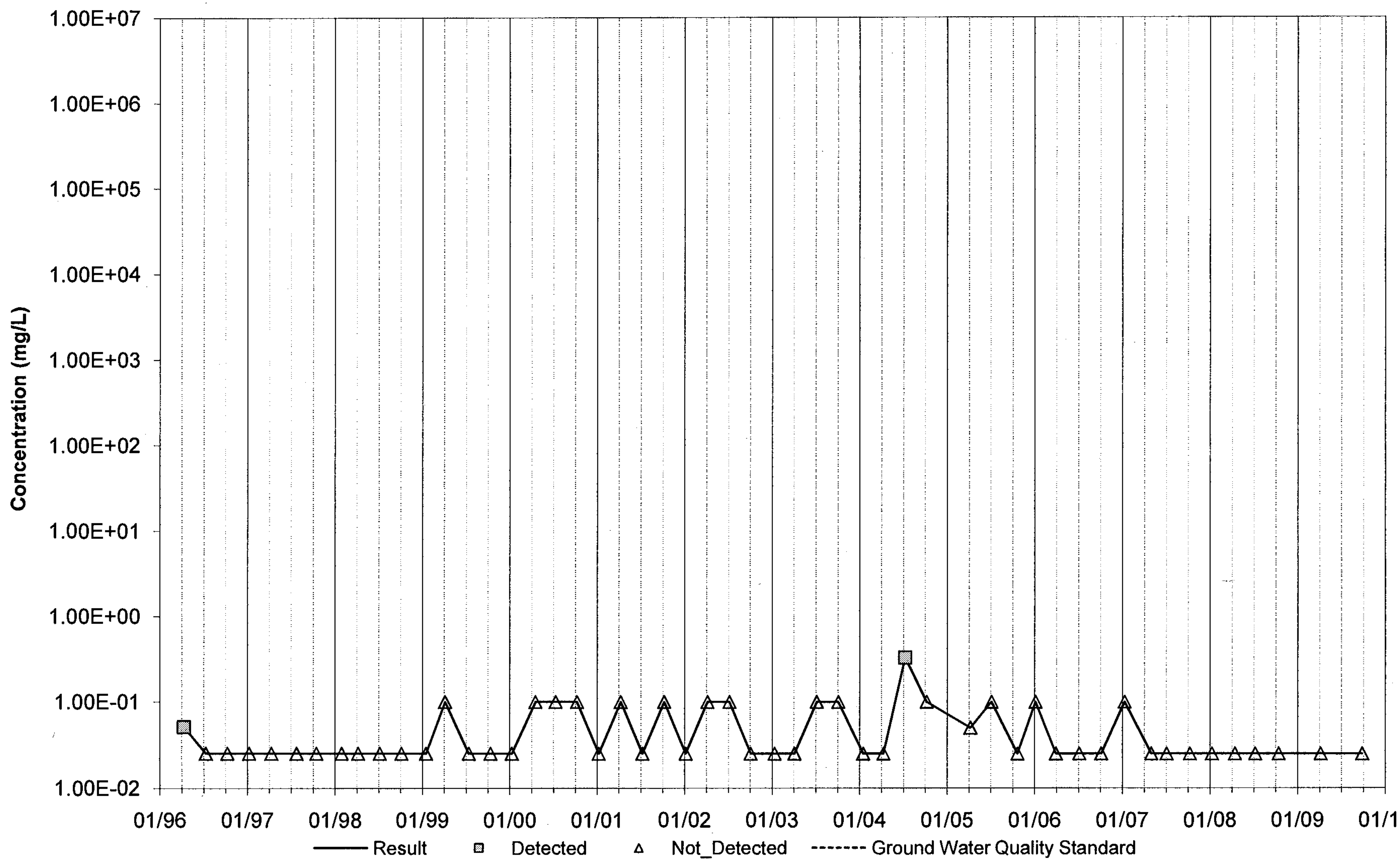


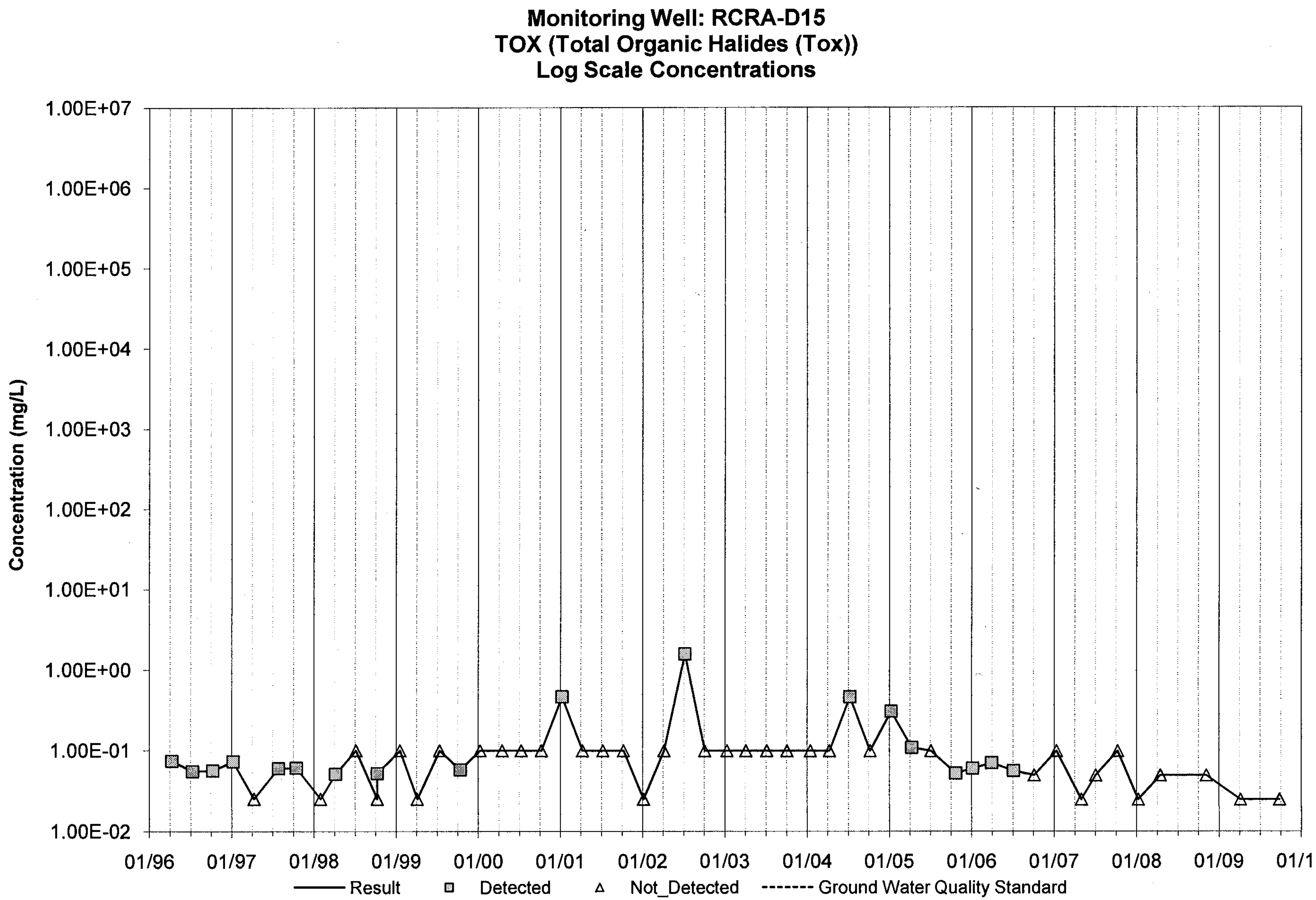
Monitoring Well: RCRA-D12
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Monitoring Well: RCRA-D13
TOX (Total Organic Halides (Tox))
Log Scale Concentrations



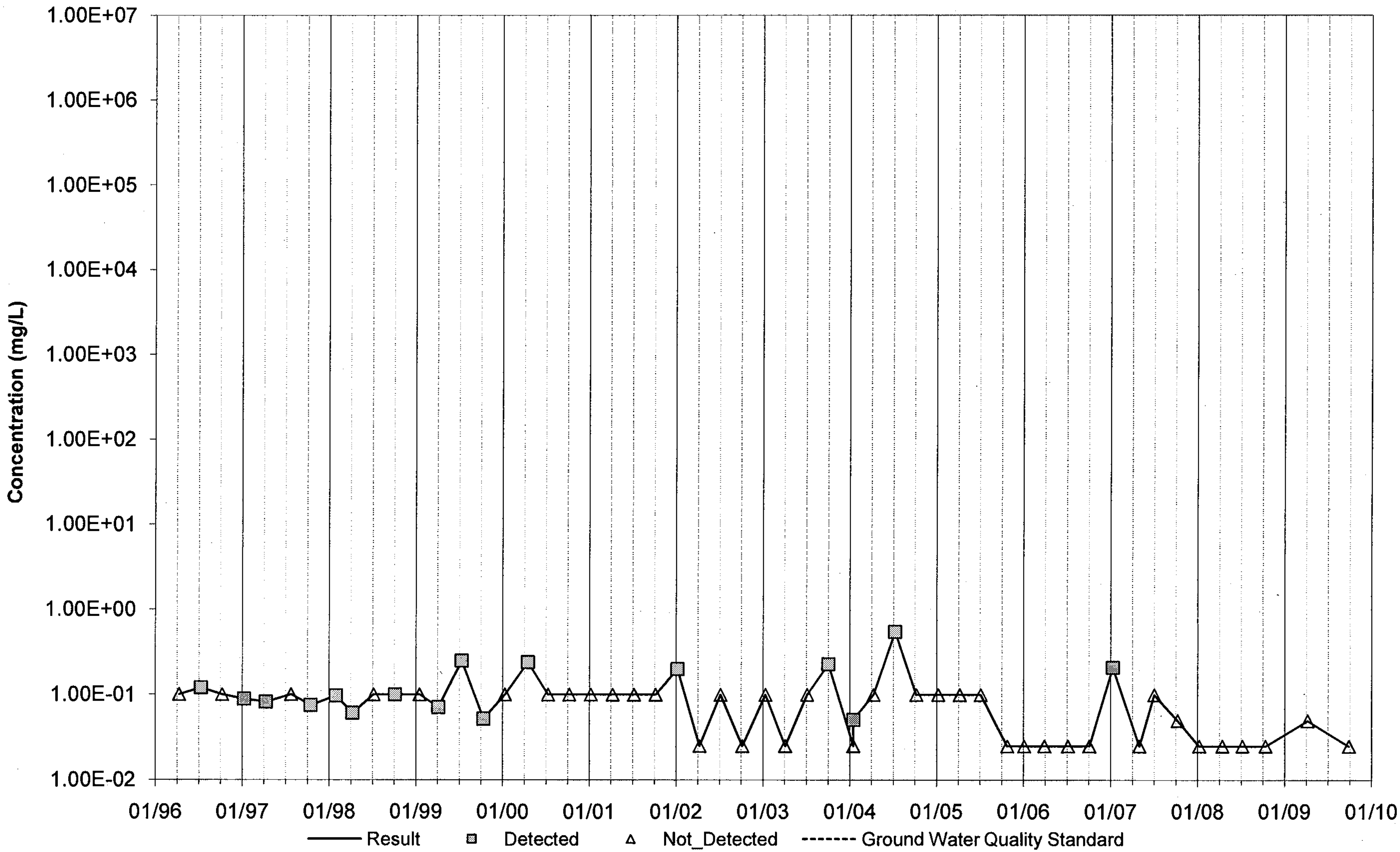
Monitoring Well: RCRA-D14
TOX (Total Organic Halides (Tox))
Log Scale Concentrations

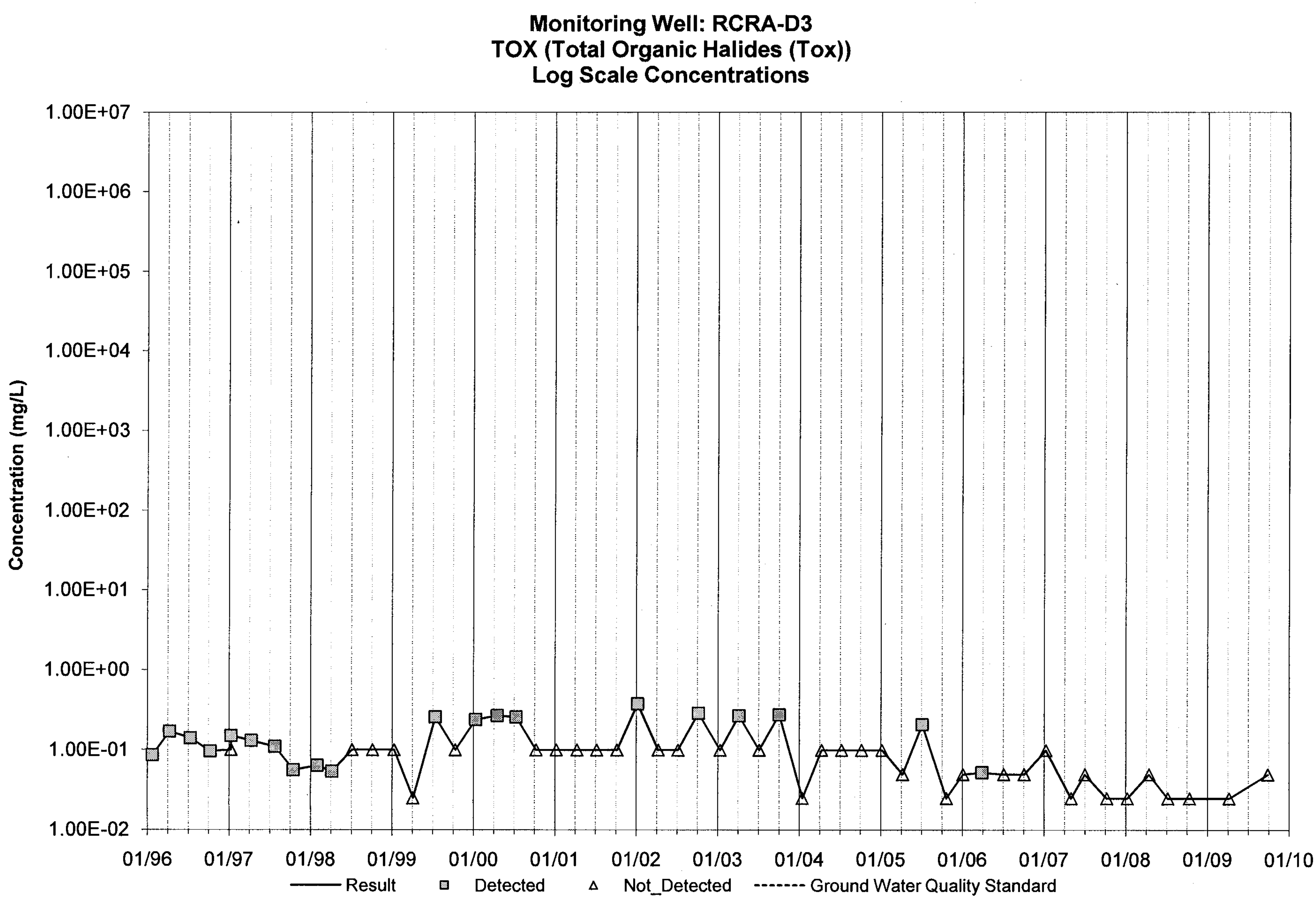


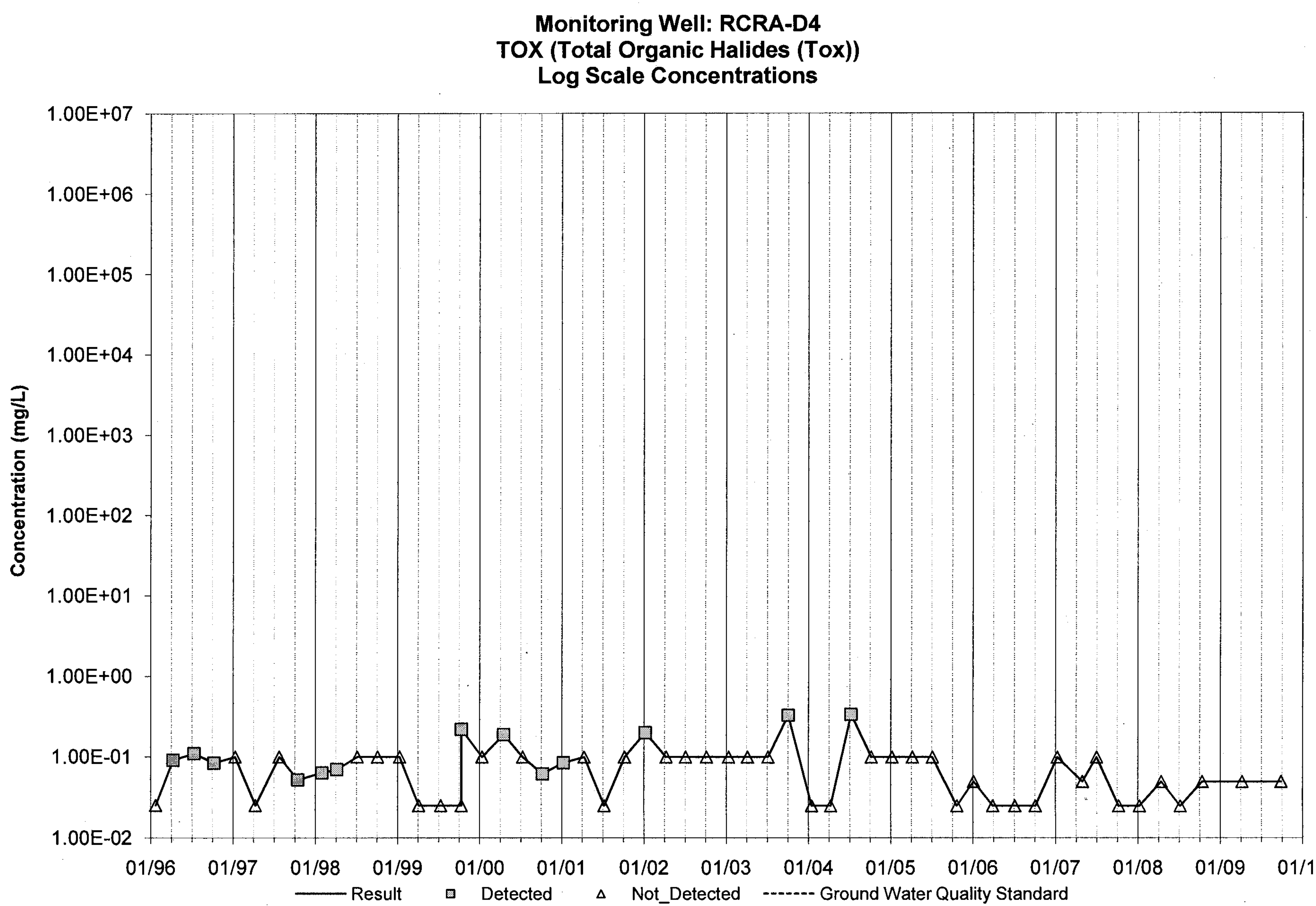


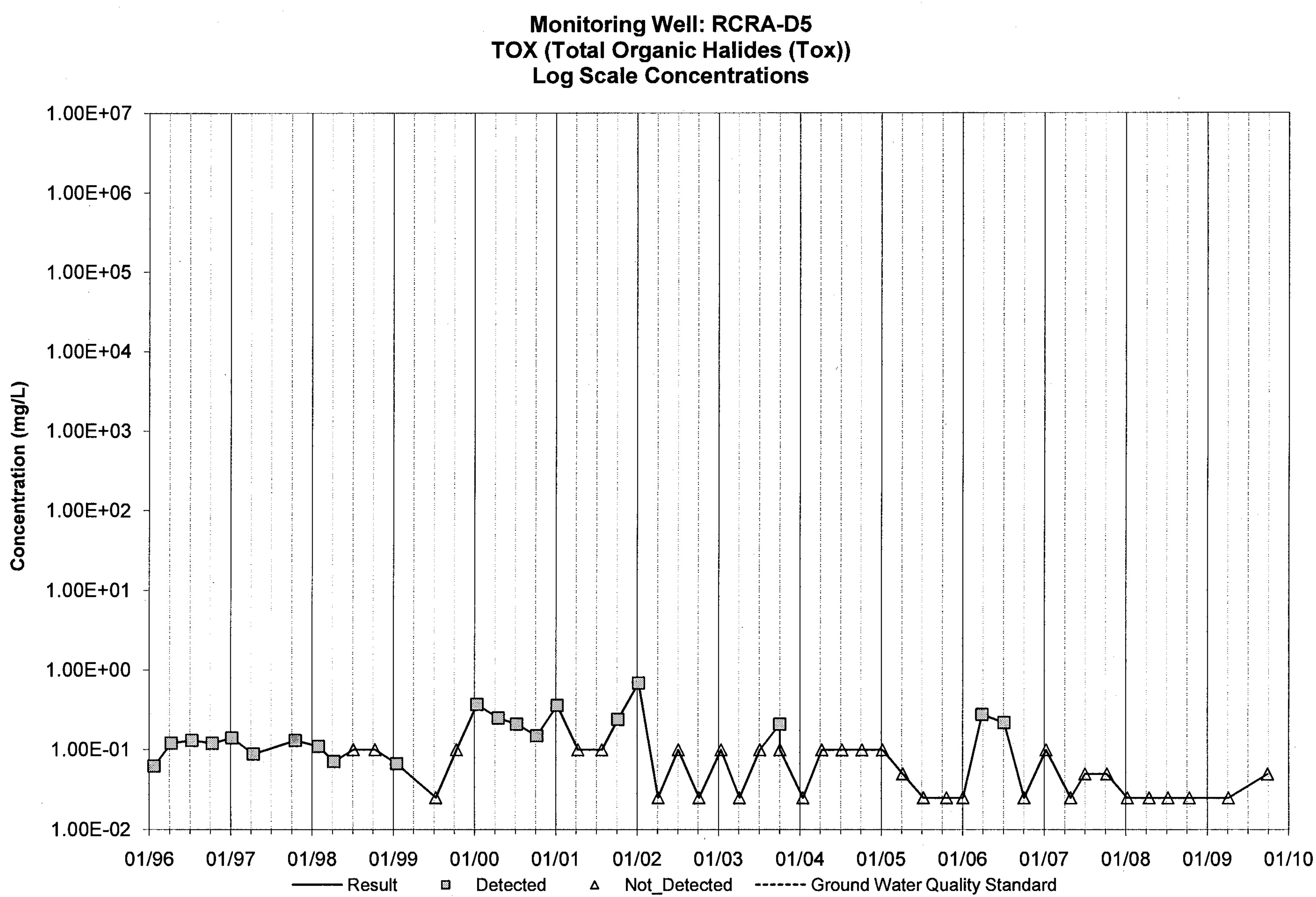
Monitoring Well: RCRA-D15
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
------- Ground Water Quality Standard

Monitoring Well: RCRA-D2
TOX (Total Organic Halides (Tox))
Log Scale Concentrations

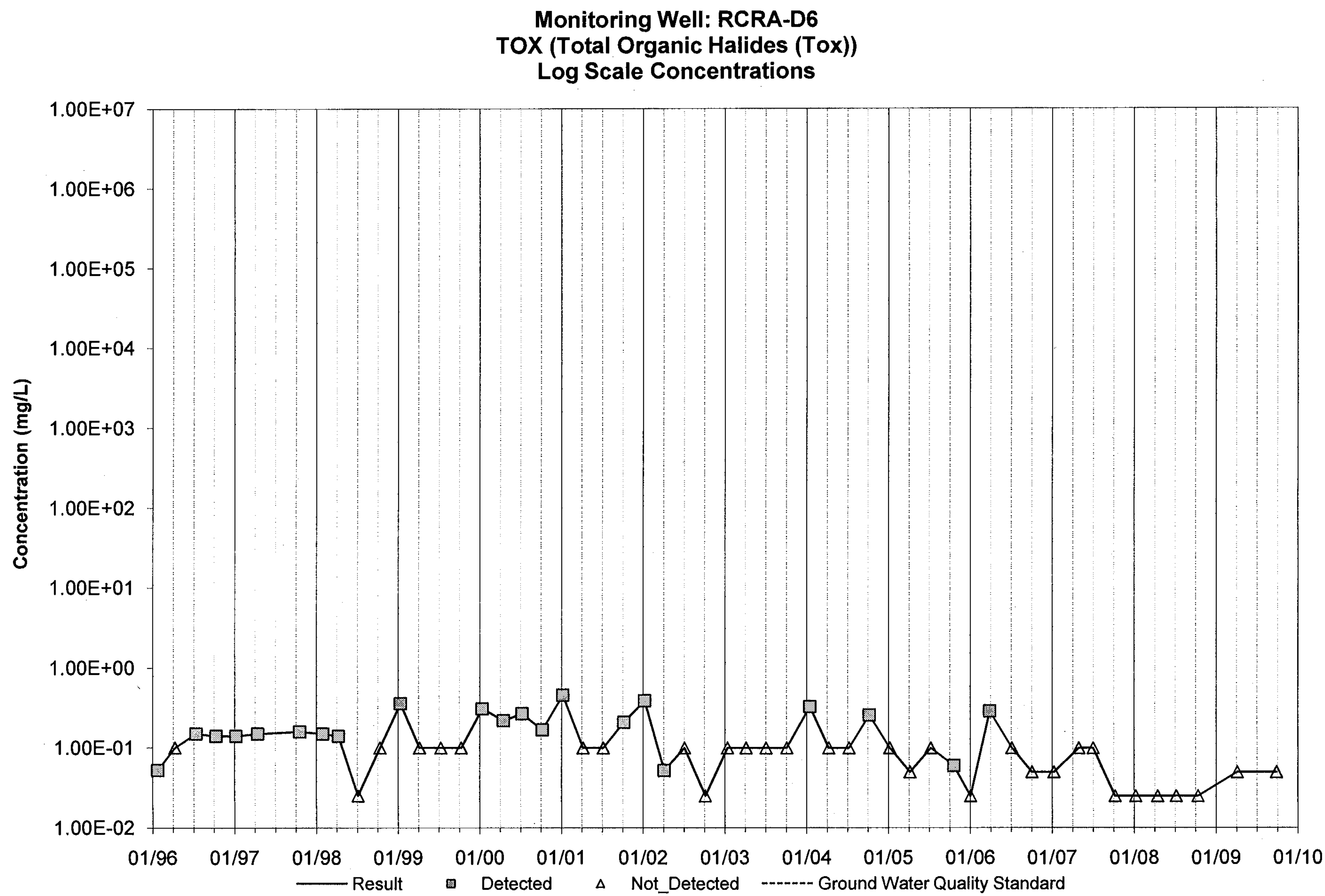


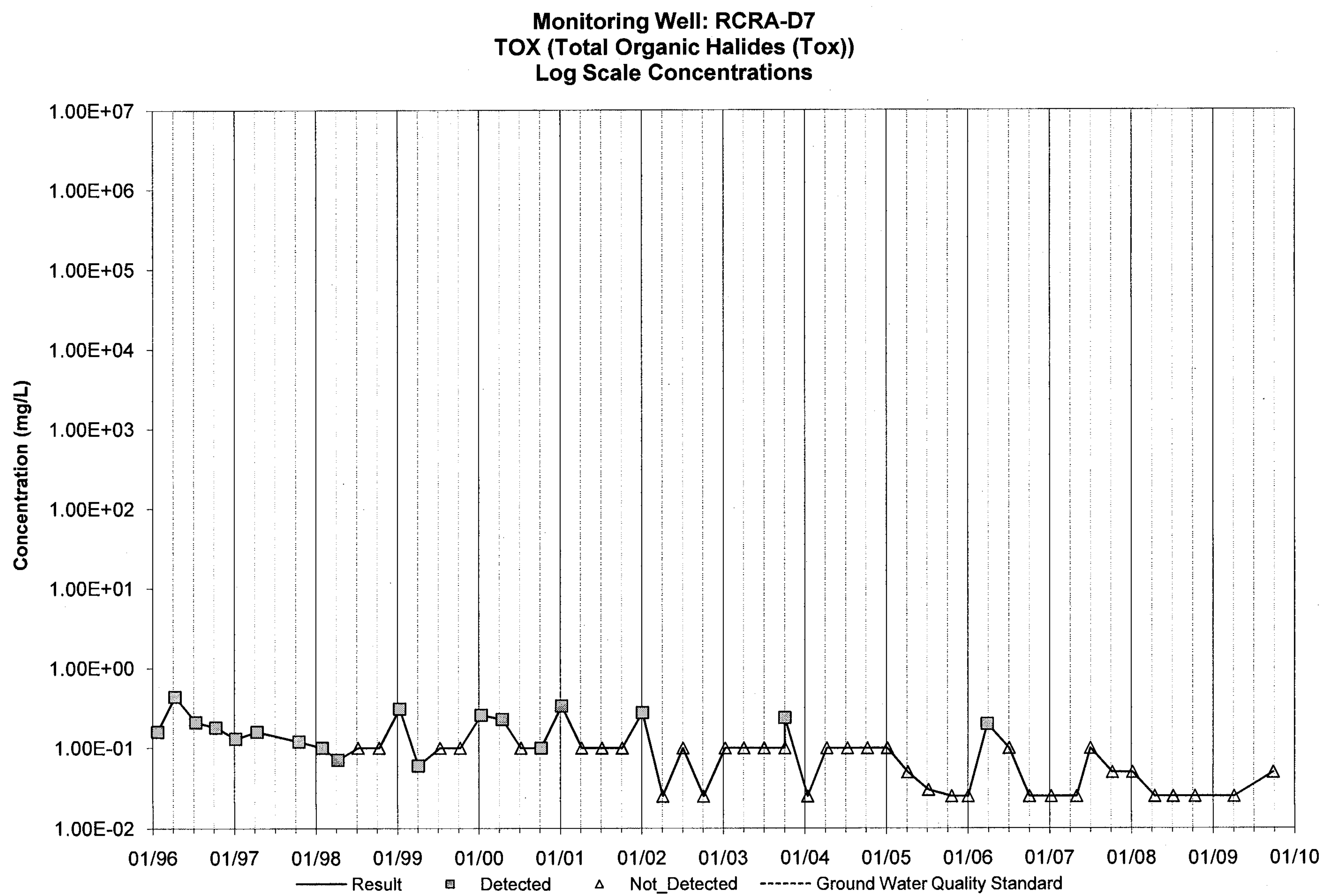

Monitoring Well: RCRA-D3
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

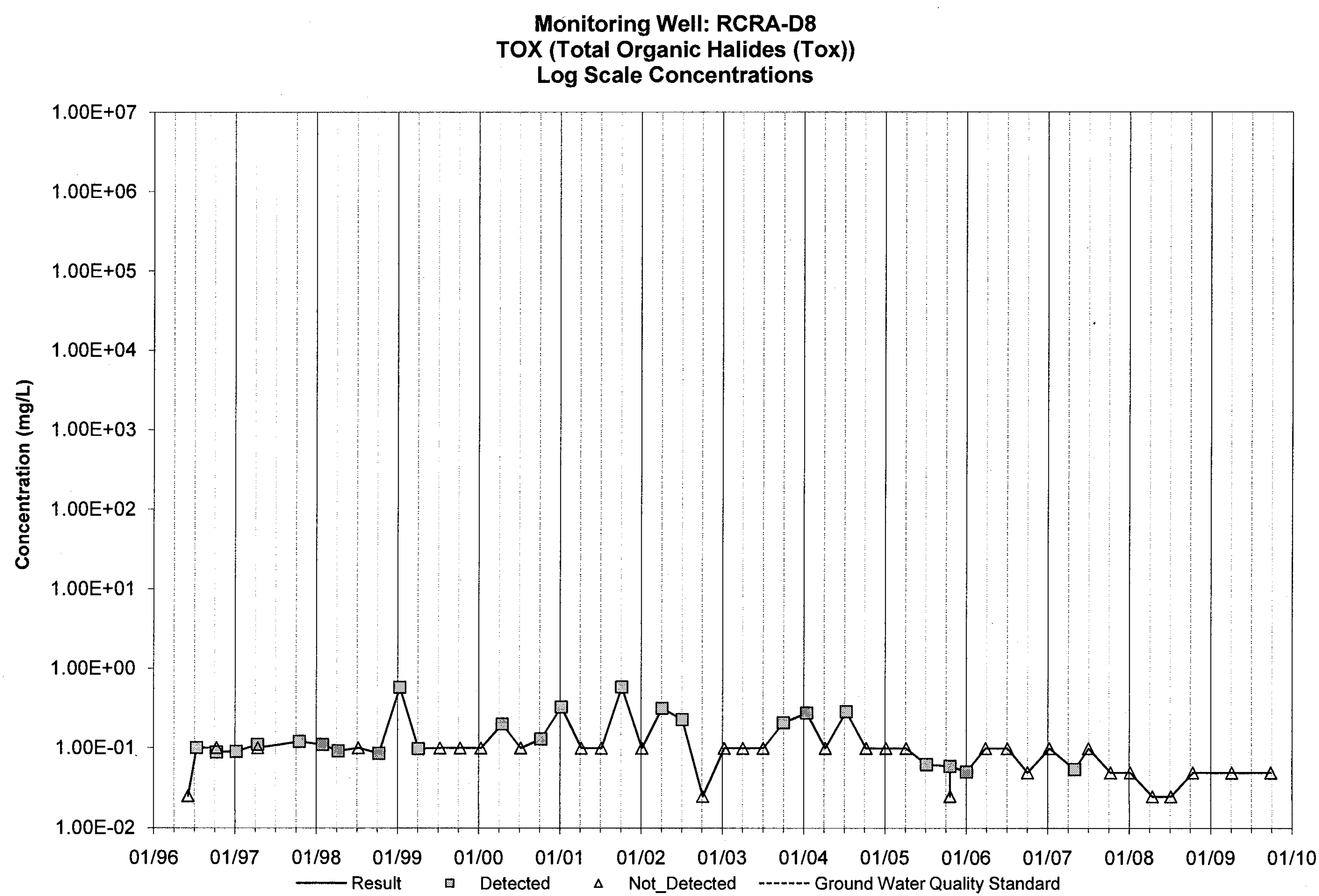

Monitoring Well: RCRA-D4
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



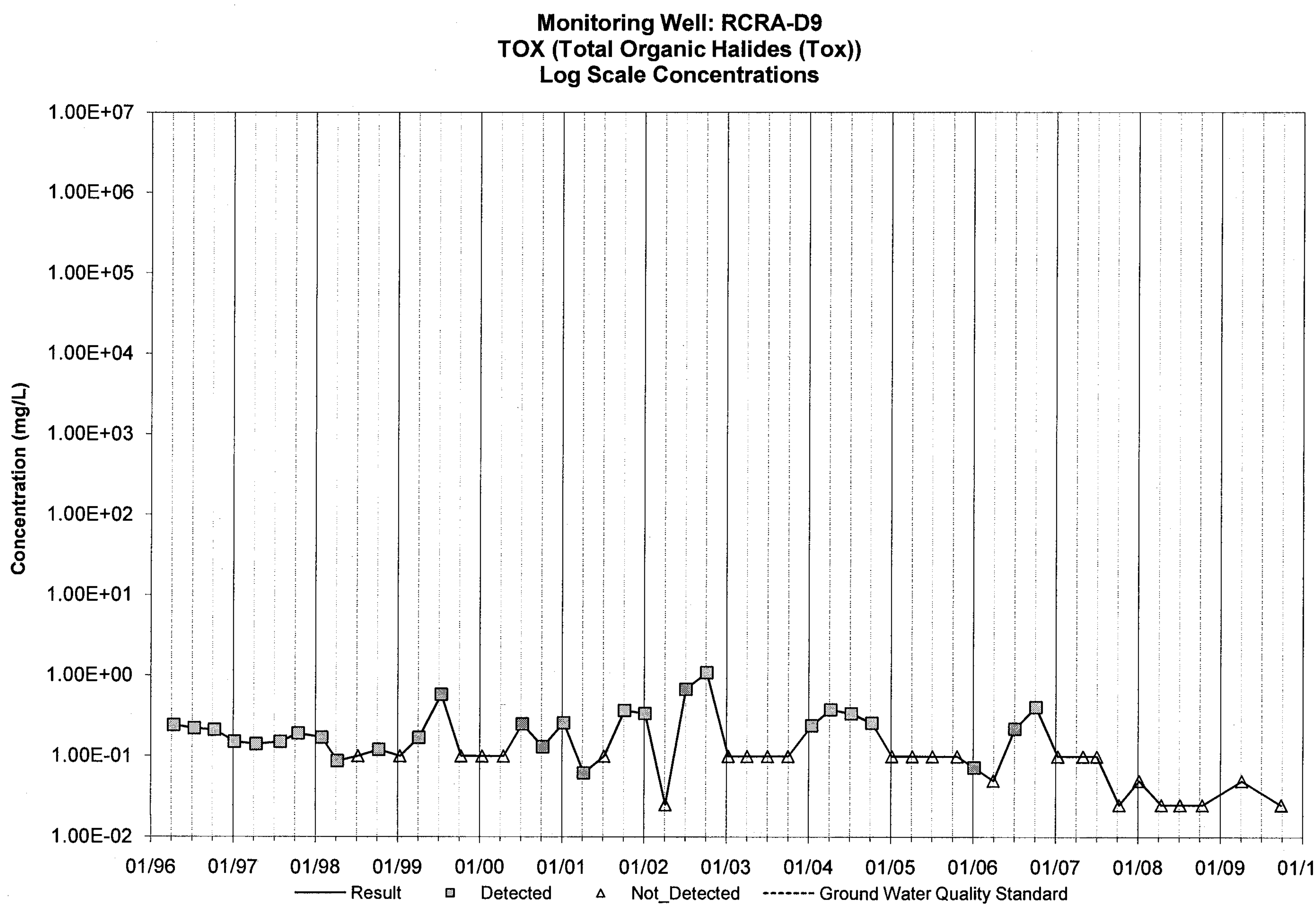
Monitoring Well: RCRA-D5
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: RCRA-D6
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard


Monitoring Well: RCRA-D7
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



Monitoring Well: RCRA-D8
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard



Monitoring Well: RCRA-D9
TOX (Total Organic Halides (Tox))
Log Scale Concentrations
Concentration (mg/L)
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
1.00E-01
1.00E-02
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
01/09
01/10
Result
Detected
Not_Detected
Ground Water Quality Standard

Appendix D

Data Validation Review

Appendix - Wyeth second semi-annual 2009 data review

A limited review of quality control data summary forms was performed for the environmental samples collected on 10/6/09, 10/7/09, 10/08/09 and 10/09/09. The following is a report on the results of rejected and negated data identified during this limited review. Analyses performed by the laboratory included TCL volatile organic compounds (VOCs), TCL semivolatile organic compounds (SVOCs), TAL metals, cyanide, chloride, phenol, total organic halides (TOX), total dissolved solids (TDS), total organic carbon (TOC), Gross Alpha, Gross Beta, Radium 226 and Radium 228 analysis.

One trip blank was provided per each sample shipment associated with VOC analysis sent to the laboratory. A field blank was collected each of the sampling days. The analyses requested for the field blanks included TCL VOCs, TCL SVOCs, TAL metals, cyanide, chloride, phenol, Gross Alpha, Gross Beta, Radium 226 and Radium 228 analysis. Field blanks were not collected for TOX, TDS, and TOC analysis.
Field duplicate analyses were collected and analyzed for TCL VOCs, TCL SVOCs, TAL metals, cyanide, chloride, phenol, TOX, TDS, TOC, Gross Alpha, Gross Beta, Radium 226 and Radium 228 analysis.

Summary forms of quality control data, which are listed in the New Jersey Reduced Laboratory Data Deliverables guidance, were reviewed during the limited review. The laboratory internal quality control program included method and preparation blanks, initial and continuing calibrations, internal standard evaluations, GC/MS instrument performance checks, surrogate recovery evaluation, serial dilution analysis, blank spikes, laboratory duplicate analysis, interference check standards, and analysis of matrix spike/matrix spike duplicate (MS/MSD) sets.

Minor excursions were noted during the data review process for MS/MSD, blank, field duplicate and calibration excursions.

In addition, the following observations were made pertaining to the sample collection:

- Minor inconsistencies were identified between the client identifications listed on the chain-of-custody record and the sample labels.
- Minor inconsistencies were identified between the dates that the samples were received by the laboratory listed on the chain-of-custody record and dates listed in the laboratory computer system.

The following revision was made to one sample result as a result of the limited review process:

- Results for phenanthrene in sample RCRA-DC01 were reported by the laboratory using both SIM and full scan GC/MS techniques. As a result of improved target analyte identification in the SIM mode, the result from only the SIM mode was reported during the review process.

Major excursions were not identified based on the limited review performed for this sampling event.

The remaining minor excursions detected would not require rejection or negation of data based on NJDEP data validation standard operating procedures. Based on the limited review performed, in general, both field and laboratory quality control results indicated that the data produced during the sampling and analysis program, which are presented in this report, are valid. Considering the complete data set for this investigation, the overall data usability in terms of data that has not been rejected or negated is 100 percent, which meets the criterion of greater than 95 percent.

Final review of data by: /for 1/14/09

Karen Storne Date

Technical Associate/Data Validator

Appendix E

Impound 8 Leachate Monitoring Data

Appendix E
Leachate Monitoring Results
Wyeth Holdings Corporation
Bound Brook Remediation Program

Cell 1

Monitoring Date	Average Leachate Detection (Secondary System) Quantity (gpad)
July 1, 2009	15
July 8, 2009	12
July 15, 2009	49
July 22, 2009	0
July 29, 2009	13
August 5, 2009	253
August 12, 2009	34
August 19, 2009	16
August 26, 2009	151
September 3, 2009	49
September 9, 2009	22
September 16, 2009	14
September 23, 2009	13
September 30, 2009	19
October 7, 2009	11
October 14, 2009	9
October 21, 2009	14
October 28, 2009	134
November 4, 2009	36
November 11, 2009	13
November 18, 2009	11
November 25, 2009	10
December 2, 2009	8
December 9, 2009	48
December 16, 2009	35
December 23, 2009	17
December 30, 2009	32

Source: O'Brien & Gere Engineers, Inc.

Appendix E
Leachate Monitoring Results
Wyeth Holdings Corporation
Bound Brook Remediation Program

Cell 2

Monitoring Date	Average Leachate Detection (Secondary System) Quantity (gpad)
July 1, 2009	16
July 8, 2009	0
July 15, 2009	0
July 22, 2009	0
July 29, 2009	0
August 5, 2009	0
August 12, 2009	0
August 19, 2009	9
August 26, 2009	0
September 3, 2009	0
September 9, 2009	0
September 16, 2009	0
September 23, 2009	0
September 30, 2009	0
October 7, 2009	0
October 14, 2009	7
October 21, 2009	0
October 28, 2009	0
November 4, 2009	0
November 11, 2009	0
November 18, 2009	0
November 25, 2009	9
December 2, 2009	0
December 9, 2009	0
December 16, 2009	0
December 23, 2009	0
December 30, 2009	0

Source: O'Brien & Gere Engineers, Inc.

Appendix E
Leachate Monitoring Results
Wyeth Holdings Corporation
Bound Brook Remediation Program

Cell 3

Monitoring Date	Average Leachate Detection (Secondary System) Quantity (gpad)
July 1, 2009	69
July 8, 2009	0
July 15, 2009	0
July 22, 2009	0
July 29, 2009	0
August 5, 2009	0
August 12, 2009	0
August 19, 2009	0
August 26, 2009	0
September 3, 2009	0
September 9, 2009	0
September 16, 2009	0
September 23, 2009	0
September 30, 2009	0
October 7, 2009	0
October 14, 2009	0
October 21, 2009	0
October 28, 2009	0
November 4, 2009	0
November 11, 2009	0
November 18, 2009	0
November 25, 2009	0
December 2, 2009	34
December 9, 2009	0
December 16, 2009	0
December 23, 2009	0
December 30, 2009	0

Source: O'Brien & Gere Engineers, Inc.

Appendix E
Leachate Monitoring Results
Wyeth Holdings Corporation
Bound Brook Remediation Program

Cell 4

Monitoring Date	Average Leachate Detection (Secondary System) Quantity (gpad)
July 1, 2009	74
July 8, 2009	4
July 15, 2009	0
July 22, 2009	0
July 29, 2009	8
August 5, 2009	0
August 12, 2009	0
August 19, 2009	5
August 26, 2009	19
September 3, 2009	0
September 9, 2009	5
September 16, 2009	0
September 23, 2009	0
September 30, 2009	6
October 7, 2009	0
October 14, 2009	0
October 21, 2009	6
October 28, 2009	0
November 4, 2009	5
November 11, 2009	0
November 18, 2009	7
November 25, 2009	0
December 2, 2009	0
December 9, 2009	9
December 16, 2009	0
December 23, 2009	0
December 30, 2009	0

Source: O'Brien & Gere Engineers, Inc.

Ground Water Velocity Calculations

Appendix F - Ground water velocity calculation

1. Background Information
   K: Hydraulic Conductivity
   1.52×10^{-3} ft/min (previous reports)
   i: Hydraulic Gradient (from contour plan Figure 4-3)
   Eastern side calculated from well RCRA-D1 to RCRA-D6:
   $\frac{25.09 - 22.27}{817} = 0.004$ ft/ft
   Western side calculated from well RCRA-D14 to RCRA-D11:
   $\frac{27.43 - 21.67}{860} = 0.007$ ft/ft
   A: Cross-sectional Area
   Q: Discharge
   V: Specific Discharge
   v: Actual flow velocity
   n: Porosity
   estimated to be 0.10 (from Freeze & Cherry 1979)

2. Darcy's Law
   Q = KiA

3. Dividing (Q) by (A) to obtain specific discharge (V)
   V = Ki

4. To account for porosity, (V) is divided by (n). This is results from the fact that ground water only flows through pore spaces in the material.

   v = V/n

The following provides the flow calculation for the gradient determined above.

5.

Eastern Side	Western Side
Ground water flow from	Ground water flow from
well RCRA-D1 to RCRA-D6	well RCRA-D14 to RCRA-D11:
v = 6.08×10^{-5} ft/min	v = 1.06×10^{-4} ft/min
v = 31.96 ft/yr	v = 55.92 ft/yr

Appendix G

Description of Statistical Methods

CYANAMID

RECEIVED

JAN 23 1992

BLASLAND, BOUCK & LEE
NEW JERSEY

To: J. Jerome

Location: Bound Brook

From: P. Portini

Location: Stamford

Extension: 2685

Date: 21 Jan 1992

Copy to: F. Bruey
C. Costello (BB&L)

Subject: Groundwater Monitoring Statistical Test

Reference: Memo, P.P. to J.J., "Impound 8 detection monitoring program", 2 June 1987.

This note relates to a statistical test recommended (ref.) for comparing indicator parameters for downgradient wells with a set of upgradient wells. Intended to properly account for well-to-well (spatial) variability, the t-test statistic is

$$t_i = (y_i - \bar{x})/s\sqrt{(1 + 1/n)}$$

where $\bar{x}$ and s (with n-1 degrees of freedom) are the average and standard deviation of results for n upgradient wells; and y_i is observed for the i-th downgradient well. Critical values based on Dunnett(1955) were recommended to take account of the multiple comparisons problem, which arises when tests are carried out for several downgradient wells simultaneously.

Critical values for the t-test are required for the case where results from nine downgradient wells are to be compared against the distribution from four upgradient wells. The parameters are slightly outside the range given by Dunnett.

The critical value for the t-test depends on:

- The significance level. We understand that the 0.05 level is to be used.

- The number of degrees of freedom for s. This is n-1 = 3 for four upgradient wells used.

- Whether a one-sided or two-sided test is desired. In a one-sided test, only positive t_i larger than a critical value are statistically significant. In a two-sided test, t_i positive or negative is significant if larger in absolute value than the critical value.

- Whether the multiple comparisons problem is to be taken into account. If not, Student's t critical values apply. However, the expected number of rejections, assuming all k downgradient wells are effectively in the same population as upgradient, will be 0.05*k. Dunnett critical values are intended to control the overall probability of rejection on the assumption of no up- versus down-difference to 0.05. Critical values are percentage points of the distribution of $\max(t_i)$.

- When account of multiple comparisons is to be taken, the number of downgradient wells, k, being compared at one time with upgradients. In the present case, k=9.

- The ratio of numbers of observations for each treatment to the numbers of controls. This is a technical item in the statistical theory. In the present case, the parameter ρ (rho) equals 1/(1+n) = 0.2.

We looked into the literature on tabulation of critical values for this test statistic. Dunnett(1955,1964) gives 0.05 level critical values for one and two sided multiple comparisons for $\rho = 0.5$, degrees of freedom 5 or greater, and k up to 9. Hahn and Hendrickson(1971) give critical values for two-sided tests for values of ρ including 0.2, degrees of freedom 3 or greater, and k up to 20. They do not give values for one-sided tests; the value for two-sided level 0.10 is used below as an approximation to one-sided level 0.05. Bechhofer and Dunnett(1988) is the most recent tabulation. This is not readily available, so has not been consulted.

Critical t values for comparison of nine downgradient with four upgradient wells using t_i (i=1,...,9) as above are as follows. Student's t figures are as commonly tabulated for 3 degrees of freedom and 0.05 significance. Multiple comparisons t figures are from Table 2 of Hahn and Hendrickson(1971), for $\rho = 0.2$, df = 3, k = 9 (by interpolation between k=8 and k=10).

	Critical t value for 0.05 significance level	
	One-sided	Two-sided
Student's t: The t_i statistic for each downgradient well is below the critical value with probability 0.95 when y_i comes from the same normal population as $x_1,\ldots,x_4$.	2.35	3.18
Multiple Comparisons t: All t_i statistics for nine downgradient wells are below the critical value with probability 0.95 when $y_1,\ldots,y_9$ come from same normal population as $x_1,\ldots,x_4$.	4.31*	5.61

* Critical value for 0.10 level two-sided test.

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Peter Fortini

Peter Fortini

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A table of percentage points of the distribution of the largest absolute value of k Student t variates and its applications

BY GERALD J. HAHN AND RICHARD W. HENDRICKSON
General Electric Company, Schenectady, New York

SUMMARY

A table of $100\gamma\%$ points of the maximum absolute value $|t|$ of the k-variate Student t distribution with ν degrees of freedom and common correlation ρ is given for various values of k, ν, ρ and γ. The application of these tables to problems dealing with the construction of simultaneous confidence and prediction intervals is briefly described.

1. INTRODUCTION

The multivariate Student t distribution appears to have been first discussed by Dunnett & Sobel (1954, 1955) and by Cornish (1954). In particular, the expression for the k-variate Student t probability density function with ν degrees of freedom is

$$f(t_1, \ldots, t_k; \nu, \mathbf{R}) = \frac{\Gamma\{\frac{1}{2}(k+\nu)\}\,|\mathbf{R}|^{-\frac{1}{2}}}{(\nu\pi)^{\frac{1}{2}k}\,\Gamma(\frac{1}{2}\nu)}(1 + \mathbf{t}'\mathbf{R}^{-1}\mathbf{t}/\nu)^{-\frac{1}{2}(k+\nu)},$$

where $\mathbf{t} = (t_1, \ldots, t_k)'$ and $\mathbf{R}$ is a $k \times k$ element correlation matrix. We shall be concerned with the special case where all off-diagonal elements of $\mathbf{R}$ are equal to a constant value ρ and will denote the resulting probability density as $f(t_1, \ldots, t_k; \nu, \rho)$.

This article provides tabulations of percentage points of the maximum absolute value $|t|$ of the k-variate Student t distribution with ν degrees of freedom and common correlation ρ, i.e. the tabulated values given here are the solutions $u = u(k, \nu, \rho; \gamma)$ to

$$G(u) = \int_{-u}^{u} \cdots \int_{-u}^{u} f(t_1, \ldots, t_k; \nu, \rho)\, dt_1 \ldots dt_k = \gamma$$

for various values of k, ν, ρ and γ. Application of these tabulations to problems dealing with the construction of simultaneous prediction and confidence intervals are indicated in § 3. Many, but not all, of these applications have been presented previously in the literature.

Some existing specialized tabulations of $u(k, \nu, \rho; \gamma)$ are given by:

(a) Dunn & Massey (1965) for limited values of k and ν;
(b) Dunnett (1964) for $\rho = 0.5$, and $\gamma = 0.95$ and 0.99;
(c) Pillai & Ramachandran (1954) for $\rho = 0$ and $\gamma = 0.95$;
(d) Steffens (1969) for $k = 2$.

In addition, Dunnett (1964) provided adjustment factors to his tabulations for $\rho = 0.5$ to obtain values of $u(k, \nu, \rho; \gamma)$ for values of $0 \leqslant \rho < 0.5$. These adjustment factors were claimed by Dunnett to provide accuracy to one unit in the second decimal place over the range $0.125 \leqslant \rho < 0.5$ and for the extreme case where $\rho = 0$, to give a value which is too high, but even then by only approximately three units in the second decimal place before rounding. These claims were supported by the results of the computer program described below. In addition, a table of $G(u)$ for various combinations of k, ν and ρ has been developed by Dunn, Kronmal & Yee (1968).

Despite the preceding specialized tabulations, there is, as indicated by Miller (1966, p. 76), a need for more extensive tables. The purpose of the present tabulations is to help satisfy this need. Another related general set of tabulations is that of percentage points of the multivariate t^2 distribution given in an unpublished report by P. R. Krishnaiah and J. V. Armitage for all combinations of $k = 1(1)10$, $\nu = 5(1)35$, $\rho = 0{\cdot}05(0{\cdot}05)0{\cdot}9$ and $\gamma = 0{\cdot}90$, $0{\cdot}95$, $0{\cdot}975$ and $0{\cdot}99$. The square roots of these values, which are given to two decimal places, yield values comparable to those given in the present tables.

Companion tables of percentage points of the maximum signed value of the multivariate Student t distribution have previously been given in an unpublished report by P. R. Krishnaiah and J. V. Armitage for all combinations of $k = 1(1)10$, $\nu = 5(1)35$, $\rho = 0{\cdot}0(0{\cdot}1)0{\cdot}9$ and $\gamma = 0{\cdot}90$, $0{\cdot}95$, $0{\cdot}975$ and $0{\cdot}99$. These tabulations have been published in the literature for $\gamma = 0{\cdot}95$ and $\gamma = 0{\cdot}99$ (Krishnaiah & Armitage, 1966) and are applicable for the one-sided analogues of the applications indicated in §3.

2. DESCRIPTION OF THE TABLES

Tables 1 to 4 provide tabulations of the factors $u(k, \nu, \rho; \gamma)$ for all combinations of $k = 1(1)6, 8, 10, 12, 15, 20$; $\nu = 3(1)12, 15, 20, 25, 30, 40, 60$; $\rho = 0{\cdot}0$ (Table 1), $0{\cdot}2$ (Table 2), $0{\cdot}4$ (Table 3) and $0{\cdot}5$ (Table 4); and $\gamma = 0{\cdot}90$, $0{\cdot}95$ and $0{\cdot}99$. Other values within the range of the tables can be obtained by standard interpolation techniques. A recent paper by Tong (1970) provides a procedure which can be used to obtain conservative estimates of the factors for $k > 20$ using the tabulated factors for $k = 20$. Also, some limiting values as $\nu \to \infty$ are given by Dunn & Massey (1965).

The values of $u(k, \nu, 0{\cdot}5; \gamma)$ in Table 4 for all combinations of $k = 1(1)6, 8, 10, 12, 15, 20$; $\nu = 5(1)12, 15, 20, 30, 40, 60$; $\gamma = 0{\cdot}95$ and $0{\cdot}99$ are taken from Dunnett (1964) and are given to two decimal places. The remaining values in Table 4 and all the values in the other tabulations here were obtained using a new computer program and are given to three decimal places.

The basis of the computer program is as follows. The program uses the result (see, for example, Gupta & Sobel, 1957) that, when all off-diagonal elements of the correlation matrix $\mathbf{R}$ are equal to a constant positive value ρ,

$$G(u) = \int_0^\infty \left[\int_{-\infty}^{\infty} \left\{\Phi\left(\frac{us+\rho^{\frac{1}{2}}y}{(1-\rho)^{\frac{1}{2}}}\right) - \Phi\left(\frac{-us+\rho^{\frac{1}{2}}y}{(1-\rho)^{\frac{1}{2}}}\right)\right\}^k \phi(y)\,dy\right] g(s;\nu)\,ds,$$

where $\phi(y)$ and $\Phi(x)$ are the probability density and cumulative distribution function respectively of a standard normal variate, and $g(s;\nu)$ is the probability density of S, where νS^2 is a chi-squared variate with ν degrees of freedom.

The program calculates $G(u)$ using 20 point Gauss–Hermite quadrature to evaluate the inner integral and Gaussian quadrature with 10 points in each of four intervals, 40 points in all, to evaluate the outer integral. The program then obtains $u(k, \nu, \rho; \gamma)$ as the solution to $G(u) = \gamma$ by inverse interpolation. Comparison of the values obtained by this program with those from previous tabulations, where available, indicated close correspondence and, in particular, accuracy to the number of decimal places shown; see Hahn (1970) for further details.

Table 1. 100γ% points of the distribution of the largest absolute value of k Student t variates with ν degrees of freedom and common correlation ρ = 0·0, i.e. values of u(k, ν, 0·0; γ)

ν \ k	1	2	3	4	5	6	8	10	12	15	20
						$\gamma = 0{\cdot}90$					
3	2·353	2·989	3·369	3·637	3·844	4·011	4·272	4·471	4·631	4·823	5·066
4	2·132	2·662	2·976	3·197	3·368	3·506	3·722	3·887	4·020	4·180	4·383
5	2·015	2·491	2·769	2·968	3·116	3·239	3·430	3·570	3·694	3·837	4·018
6	1·943	2·385	2·642	2·823	2·961	3·074	3·249	3·384	3·493	3·624	3·790
7	1·895	2·314	2·566	2·725	2·860	2·963	3·127	3·253	3·355	3·478	3·635
8	1·860	2·262	2·494	2·660	2·780	2·881	3·036	3·156	3·255	3·373	3·533
9	1·833	2·224	2·447	2·603	2·723	2·819	2·970	3·086	3·179	3·292	3·430
10	1·813	2·193	2·410	2·562	2·678	2·771	2·918	3·039	3·120	3·229	3·368
11	1·796	2·169	2·381	2·529	2·642	2·733	2·875	2·984	3·072	3·178	3·313
12	1·782	2·149	2·357	2·501	2·612	2·701	2·840	2·946	3·032	3·136	3·268
15	1·753	2·107	2·305	2·443	2·548	2·633	2·765	2·865	2·947	3·045	3·170
20	1·725	2·065	2·255	2·386	2·485	2·567	2·691	2·786	2·863	2·956	3·073
25	1·708	2·041	2·226	2·353	2·450	2·528	2·648	2·740	2·814	2·903	3·016
30	1·697	2·025	2·207	2·331	2·426	2·502	2·620	2·709	2·781	2·868	2·976
40	1·684	2·006	2·183	2·305	2·397	2·470	2·585	2·671	2·741	2·825	2·931
60	1·671	1·986	2·160	2·278	2·368	2·439	2·550	2·634	2·701	2·783	2·884
						$\gamma = 0{\cdot}95$					
3	3·183	3·960	4·430	4·764	5·023	5·233	5·562	5·812	6·015	6·259	6·567
4	2·777	3·382	3·745	4·003	4·203	4·366	4·621	4·817	4·975	5·166	5·409
5	2·571	3·091	3·399	3·619	3·789	3·928	4·145	4·312	4·447	4·611	4·819
6	2·447	2·916	3·193	3·389	3·541	3·664	3·858	4·008	4·129	4·275	4·462
7	2·365	2·800	3·056	3·236	3·376	3·489	3·668	3·805	3·916	4·051	4·223
8	2·306	2·718	2·959	3·129	3·258	3·365	3·532	3·660	3·764	3·891	4·052
9	2·263	2·657	2·885	3·046	3·171	3·272	3·430	3·552	3·651	3·770	3·923
10	2·228	2·609	2·829	2·984	3·103	3·199	3·351	3·468	3·562	3·677	3·823
11	2·201	2·571	2·784	2·933	3·048	3·142	3·288	3·400	3·491	3·602	3·743
12	2·179	2·540	2·747	2·892	3·004	3·095	3·236	3·345	3·433	3·541	3·677
15	2·132	2·474	2·669	2·805	2·910	2·994	3·126	3·227	3·309	3·409	3·536
20	2·086	2·411	2·594	2·723	2·819	2·898	3·020	3·114	3·190	3·282	3·399
25	2·060	2·374	2·551	2·673	2·766	2·842	2·959	3·048	3·121	3·208	3·320
30	2·042	2·350	2·522	2·641	2·732	2·805	2·918	3·005	3·075	3·160	3·267
40	2·021	2·321	2·488	2·603	2·690	2·760	2·869	2·952	3·019	3·100	3·203
60	2·000	2·292	2·454	2·564	2·649	2·716	2·821	2·900	2·964	3·041	3·139
						$\gamma = 0{\cdot}99$					
3	5·841	7·127	7·914	8·479	8·919	9·277	9·838	10·269	10·616	11·034	11·559
4	4·604	5·462	5·985	6·362	6·656	6·897	7·274	7·565	7·801	8·087	8·451
5	4·032	4·700	5·106	5·398	5·625	5·812	6·106	6·333	6·519	6·744	7·030
6	3·707	4·271	4·611	4·856	5·046	5·202	5·449	5·640	5·796	5·985	6·230
7	3·500	3·998	4·296	4·510	4·677	4·814	5·031	5·198	5·335	5·502	5·716
8	3·355	3·809	4·080	4·273	4·424	4·547	4·742	4·894	5·017	5·168	5·361
9	3·250	3·672	3·922	4·100	4·239	4·353	4·532	4·672	4·785	4·924	5·103
10	3·169	3·567	3·801	3·969	4·098	4·205	4·373	4·503	4·609	4·739	4·905
11	3·106	3·485	3·707	3·865	3·988	4·087	4·247	4·370	4·470	4·593	4·750
12	3·055	3·418	3·631	3·782	3·899	3·995	4·146	4·263	4·359	4·475	4·625
15	2·947	3·279	3·472	3·608	3·714	3·800	3·936	4·040	4·125	4·229	4·363
20	2·845	3·149	3·323	3·446	3·541	3·617	3·738	3·831	3·907	3·999	4·117
25	2·788	3·076	3·239	3·354	3·442	3·514	3·626	3·713	3·783	3·869	3·978
30	2·750	3·027	3·186	3·295	3·379	3·448	3·555	3·637	3·704	3·785	3·889
40	2·705	2·969	3·119	3·225	3·303	3·367	3·468	3·545	3·607	3·683	3·780
60	2·660	2·913	3·055	3·154	3·229	3·290	3·384	3·456	3·515	3·586	3·676

Table 2. *100γ% points of the distribution of the largest absolute value of k Student t variates with ν degrees of freedom and common correlation ρ = 0·2, i.e. values of u(k, ν, 0·2; γ)*

ν \ k	1	2	3	4	5	6	8	10	12	15	20
						γ = 0·90					
3	2·353	2·978	3·347	3·607	3·800	3·967	4·216	4·405	4·557	4·739	4·969
4	2·132	2·653	2·958	3·172	3·337	3·470	3·676	3·833	3·960	4·112	4·303
5	2·015	2·482	2·753	2·943	3·089	3·207	3·390	3·530	3·643	3·778	3·948
6	1·943	2·377	2·627	2·802	2·937	3·046	3·213	3·342	3·446	3·570	3·728
7	1·895	2·306	2·549	2·707	2·833	2·935	3·093	3·214	3·312	3·429	3·577
8	1·860	2·255	2·481	2·638	2·759	2·856	3·007	3·122	3·214	3·326	3·468
9	1·833	2·217	2·435	2·586	2·702	2·796	2·941	3·052	3·141	3·248	3·384
10	1·813	2·187	2·399	2·546	2·658	2·749	2·889	2·997	3·083	3·187	3·319
11	1·796	2·163	2·370	2·513	2·623	2·711	2·846	2·952	3·036	3·138	3·266
12	1·782	2·143	2·346	2·487	2·594	2·680	2·814	2·916	2·998	3·097	3·222
15	1·753	2·101	2·295	2·429	2·531	2·613	2·741	2·837	2·915	3·009	3·128
20	1·725	2·060	2·246	2·373	2·470	2·548	2·669	2·761	2·835	2·923	3·036
25	1·708	2·036	2·217	2·341	2·435	2·510	2·627	2·716	2·787	2·873	2·981
30	1·697	2·020	2·198	2·319	2·412	2·485	2·600	2·686	2·756	2·839	2·945
40	1·684	2·000	2·174	2·293	2·383	2·455	2·566	2·649	2·717	2·798	2·900
60	1·671	1·981	2·151	2·267	2·354	2·424	2·532	2·613	2·679	2·757	2·859
						γ = 0·95					
3	3·182	3·940	4·403	4·727	4·976	5·178	5·492	5·731	5·923	6·154	6·445
4	2·776	3·371	3·725	3·975	4·168	4·325	4·569	4·755	4·906	5·087	5·316
5	2·571	3·082	3·383	3·596	3·760	3·893	4·102	4·261	4·390	4·545	4·742
6	2·447	2·908	3·178	3·369	3·516	3·636	3·821	3·964	4·079	4·219	4·395
7	2·365	2·793	3·042	3·218	3·353	3·463	3·634	3·766	3·872	4·000	4·163
8	2·306	2·711	2·946	3·111	3·238	3·340	3·501	3·624	3·724	3·844	3·997
9	2·262	2·650	2·874	3·031	3·151	3·249	3·402	3·518	3·613	3·727	3·873
10	2·228	2·603	2·818	2·969	3·084	3·178	3·324	3·436	3·527	3·637	3·776
11	2·201	2·566	2·774	2·919	3·031	3·122	3·263	3·371	3·458	3·564	3·698
12	2·179	2·535	2·738	2·879	2·988	3·076	3·213	3·317	3·402	3·504	3·635
15	2·132	2·469	2·660	2·793	2·895	2·977	3·105	3·203	3·282	3·377	3·499
20	2·086	2·406	2·586	2·711	2·806	2·883	3·002	3·093	3·166	3·255	3·367
25	2·060	2·370	2·543	2·663	2·754	2·828	2·942	3·029	3·099	3·183	3·291
30	2·042	2·346	2·515	2·632	2·721	2·792	2·903	2·987	3·055	3·137	3·241
40	2·021	2·317	2·481	2·594	2·679	2·749	2·855	2·936	3·001	3·097	3·179
60	2·000	2·288	2·447	2·556	2·639	2·705	2·808	2·886	2·948	3·023	3·119
						γ = 0·99					
3	5·841	7·104	7·871	8·418	8·841	9·184	9·721	10·132	10·469	10·860	11·360
4	4·604	5·447	5·958	6·323	6·607	6·838	7·200	7·477	7·702	7·973	8·316
5	4·032	4·690	5·095	5·389	5·589	5·769	6·051	6·268	6·444	6·658	6·930
6	3·707	4·263	4·595	4·832	5·017	5·168	5·405	5·588	5·736	5·917	6·147
7	3·500	3·991	4·283	4·491	4·653	4·786	4·994	5·155	5·286	5·445	5·648
8	3·355	3·803	4·068	4·257	4·403	4·523	4·711	4·857	4·975	5·119	5·303
9	3·250	3·666	3·911	4·086	4·221	4·331	4·505	4·639	4·748	4·881	5·051
10	3·169	3·562	3·792	3·956	4·082	4·186	4·348	4·474	4·576	4·700	4·859
11	3·106	3·480	3·699	3·854	3·974	4·071	4·225	4·344	4·440	4·558	4·708
12	3·055	3·414	3·623	3·771	3·886	3·979	4·126	4·239	4·331	4·443	4·567
15	2·947	3·276	3·466	3·599	3·703	3·787	3·919	4·020	4·103	4·204	4·332
20	2·845	3·140	3·318	3·439	3·532	3·607	3·725	3·816	3·890	3·980	4·094
25	2·787	3·072	3·235	3·348	3·435	3·506	3·616	3·701	3·769	3·853	3·959
30	2·750	3·025	3·181	3·289	3·373	3·440	3·545	3·626	3·692	3·771	3·872
40	2·705	2·967	3·116	3·218	3·297	3·361	3·460	3·536	3·598	3·672	3·767
60	2·660	2·911	3·052	3·150	3·224	3·285	3·378	3·449	3·507	3·577	3·666

Table 8. $100\gamma\%$ *points of the distribution of the largest absolute value of k Student t variates with ν degrees of freedom and common correlation $\rho = 0{\cdot}4$, i.e. values of $u(k, \nu, 0{\cdot}4; \gamma)$*

$\nu \backslash k$	1	2	3	4	5	6	8	10	12	15	20
					$\gamma = 0{\cdot}90$						
3	2·353	2·941	3·282	3·519	3·700	3·845	4·009	4·237	4·378	4·534	4·737
4	2·132	2·623	2·905	3·101	3·250	3·370	3·550	3·690	3·809	3·943	4·113
5	2·015	2·455	2·700	2·880	3·013	3·120	3·284	3·410	3·510	3·630	3·781
6	1·943	2·352	2·584	2·745	2·867	2·965	3·117	3·233	3·326	3·430	3·575
7	1·895	2·283	2·502	2·653	2·768	2·861	3·004	3·112	3·199	3·304	3·435
8	1·860	2·233	2·442	2·587	2·697	2·780	2·922	3·026	3·109	3·208	3·334
9	1·833	2·195	2·398	2·536	2·644	2·729	2·860	2·960	3·040	3·130	3·257
10	1·813	2·166	2·363	2·499	2·603	2·684	2·812	2·909	2·986	3·079	3·190
11	1·796	2·142	2·335	2·468	2·568	2·649	2·773	2·867	2·943	3·034	3·148
12	1·782	2·123	2·312	2·442	2·541	2·620	2·742	2·834	2·908	2·990	3·103
15	1·753	2·081	2·263	2·387	2·481	2·556	2·673	2·760	2·831	2·916	3·023
20	1·725	2·041	2·216	2·334	2·424	2·495	2·606	2·690	2·757	2·837	2·933
25	1·708	2·018	2·188	2·303	2·390	2·460	2·567	2·649	2·713	2·791	2·888
30	1·697	2·003	2·169	2·283	2·368	2·437	2·542	2·621	2·684	2·760	2·856
40	1·683	1·984	2·146	2·257	2·341	2·403	2·510	2·587	2·650	2·723	2·816
60	1·671	1·965	2·124	2·233	2·316	2·379	2·479	2·554	2·615	2·680	2·776
					$\gamma = 0{\cdot}95$						
3	3·183	3·908	4·324	4·620	4·846	5·026	5·309	5·523	5·693	5·898	6·156
4	2·777	3·337	3·605	3·894	4·069	4·210	4·430	4·596	4·730	4·891	5·093
5	2·571	3·053	3·333	3·528	3·677	3·798	3·986	4·128	4·243	4·381	4·555
6	2·447	2·883	3·134	3·309	3·443	3·552	3·719	3·847	3·950	4·074	4·230
7	2·365	2·770	3·002	3·164	3·288	3·388	3·543	3·661	3·756	3·870	4·014
8	2·306	2·690	2·909	3·061	3·177	3·271	3·417	3·528	3·617	3·725	3·860
9	2·262	2·630	2·839	2·984	3·095	3·184	3·323	3·429	3·513	3·616	3·745
10	2·228	2·584	2·785	2·925	3·032	3·117	3·250	3·350	3·433	3·531	3·655
11	2·201	2·547	2·742	2·877	2·980	3·063	3·192	3·290	3·369	3·464	3·583
12	2·179	2·517	2·707	2·836	2·939	3·020	3·146	3·240	3·317	3·409	3·525
15	2·132	2·452	2·633	2·756	2·850	2·927	3·043	3·133	3·205	3·291	3·400
20	2·086	2·391	2·560	2·677	2·766	2·837	2·947	3·031	3·098	3·178	3·280
25	2·060	2·355	2·520	2·631	2·718	2·786	2·891	2·971	3·036	3·113	3·211
30	2·042	2·332	2·492	2·602	2·685	2·751	2·854	2·933	2·995	3·070	3·165
40	2·021	2·304	2·459	2·565	2·646	2·711	2·810	2·885	2·945	3·018	3·110
60	2·000	2·275	2·420	2·530	2·608	2·670	2·766	2·838	2·897	2·960	3·054
					$\gamma = 0{\cdot}99$						
3	5·841	7·033	7·740	8·240	8·623	8·932	9·414	9·780	10·074	10·428	10·874
4	4·604	5·401	5·874	6·209	6·467	6·675	7·000	7·249	7·449	7·688	7·991
5	4·032	4·655	5·024	5·284	5·485	5·648	5·903	6·090	6·258	6·448	6·682
6	3·707	4·235	4·545	4·764	4·934	5·071	5·285	5·449	5·582	5·742	5·946
7	3·500	3·967	4·241	4·435	4·583	4·704	4·893	5·038	5·155	5·297	5·477
8	3·355	3·783	4·031	4·207	4·343	4·452	4·624	4·755	4·861	4·990	5·154
9	3·250	3·649	3·879	4·041	4·167	4·268	4·427	4·549	4·647	4·765	4·918
10	3·169	3·546	3·768	3·918	4·034	4·129	4·277	4·392	4·484	4·596	4·739
11	3·100	3·404	3·671	3·817	3·929	4·019	4·100	4·269	4·357	4·403	4·598
12	3·055	3·400	3·598	3·737	3·844	3·931	4·060	4·170	4·254	4·350	4·484
15	2·947	3·263	3·444	3·571	3·668	3·746	3·869	3·962	4·039	4·131	4·247
20	2·845	3·135	3·301	3·415	3·504	3·574	3·685	3·769	3·837	3·921	4·020
25	2·788	3·063	3·219	3·327	3·410	3·477	3·581	3·660	3·725	3·802	3·900
30	2·750	3·016	3·166	3·270	3·349	3·415	3·514	3·590	3·650	3·720	3·830
40	2·705	2·959	3·103	3·202	3·277	3·337	3·433	3·505	3·562	3·639	3·732
60	2·660	2·904	3·040	3·134	3·207	3·264	3·358	3·421	3·477	3·542	3·638

Table 4. $100\gamma\%$ *points of the distribution of the largest absolute value of k Student t variates with ν degrees of freedom and common correlation $\rho = 0{\cdot}5$, i.e. values of $u(k, \nu, 0{\cdot}5; \gamma)$*

ν \ k	1	2	3	4	5	6	8	10	12	15	20
						$\gamma = 0{\cdot}90$					
3	2·353	2·912	3·233	3·463	3·621	3·765	3·903	4·117	4·242	4·390	4·570
4	2·132	2·598	2·863	3·046	3·185	3·296	3·408	3·597	3·701	3·825	3·930
5	2·015	2·434	2·669	2·832	2·950	3·055	3·207	3·323	3·415	3·525	3·664
6	1·943	2·332	2·551	2·701	2·815	2·903	3·047	3·153	3·238	3·340	3·469
7	1·895	2·264	2·471	2·612	2·720	2·805	2·935	3·039	3·119	3·216	3·330
8	1·860	2·215	2·413	2·546	2·651	2·733	2·860	2·955	3·032	3·124	3·239
9	1·833	2·178	2·369	2·500	2·599	2·679	2·801	2·893	2·967	3·055	3·167
10	1·813	2·149	2·335	2·463	2·559	2·636	2·755	2·844	2·916	3·002	3·110
11	1·796	2·126	2·308	2·433	2·527	2·602	2·716	2·805	2·875	2·959	3·064
12	1·782	2·107	2·286	2·408	2·500	2·574	2·687	2·773	2·841	2·923	3·026
15	1·753	2·066	2·238	2·355	2·443	2·514	2·622	2·704	2·769	2·847	2·945
20	1·725	2·027	2·192	2·304	2·388	2·455	2·559	2·637	2·699	2·773	2·867
25	1·708	2·004	2·165	2·274	2·356	2·421	2·522	2·597	2·658	2·730	2·820
30	1·697	1·989	2·147	2·254	2·335	2·399	2·498	2·572	2·631	2·701	2·790
40	1·684	1·970	2·125	2·230	2·309	2·372	2·466	2·540	2·598	2·667	2·753
60	1·671	1·952	2·104	2·207	2·284	2·345	2·439	2·509	2·565	2·632	2·716
						$\gamma = 0{\cdot}95$					
3	3·183	3·867	4·263	4·538	4·748	4·916	5·176	5·372	5·529	5·718	5·953
4	2·777	3·310	3·618	3·832	3·995	4·126	4·325	4·480	4·606	4·752	4·938
5	2·57	3·03	3·29	3·48	3·62	3·73	3·90	4·03	4·14	4·26	4·42
6	2·45	2·86	3·10	3·26	3·39	3·49	3·64	3·76	3·86	3·97	4·11
7	2·36	2·75	2·97	3·12	3·24	3·33	3·47	3·58	3·67	3·78	3·91
8	2·31	2·67	2·88	3·02	3·13	3·22	3·35	3·46	3·54	3·64	3·76
9	2·26	2·61	2·81	2·95	3·05	3·14	3·26	3·36	3·44	3·53	3·65
10	2·23	2·57	2·76	2·89	2·99	3·07	3·19	3·29	3·36	3·45	3·57
11	2·20	2·53	2·72	2·84	2·94	3·02	3·14	3·23	3·30	3·39	3·50
12	2·18	2·50	2·68	2·81	2·90	2·98	3·09	3·18	3·25	3·34	3·45
15	2·13	2·44	2·61	2·73	2·82	2·89	3·00	3·08	3·15	3·23	3·33
20	2·09	2·38	2·54	2·65	2·73	2·80	2·90	2·98	3·05	3·12	3·22
25	2·060	2·344	2·500	2·607	2·688	2·752	2·852	2·927	2·987	3·059	3·150
30	2·04	2·32	2·47	2·58	2·66	2·72	2·82	2·89	2·95	3·02	3·11
40	2·02	2·29	2·44	2·54	2·62	2·68	2·77	2·85	2·90	2·97	3·06
60	2·00	2·27	2·41	2·51	2·58	2·64	2·73	2·80	2·86	2·92	3·00
						$\gamma = 0{\cdot}99$					
3	5·841	6·974	7·639	8·104	8·459	8·746	9·189	9·527	9·797	10·129	10·582
4	4·604	5·364	5·809	6·121	6·361	6·554	6·855	7·083	7·267	7·488	7·760
5	4·03	4·63	4·98	5·22	5·41	5·56	5·80	5·98	6·12	6·30	6·52
6	3·71	4·21	4·51	4·71	4·87	5·00	5·20	5·35	5·47	5·62	5·81
7	3·50	3·95	4·21	4·39	4·53	4·64	4·82	4·95	5·06	5·19	5·36
8	3·36	3·77	4·00	4·17	4·29	4·40	4·55	4·68	4·78	4·90	5·05
9	3·25	3·63	3·85	4·01	4·12	4·22	4·37	4·48	4·57	4·68	4·82
10	3·17	3·53	3·74	3·88	3·99	4·08	4·22	4·33	4·42	4·52	4·65
11	3·11	3·45	3·65	3·79	3·89	3·98	4·11	4·21	4·29	4·39	4·52
12	3·05	3·39	3·58	3·71	3·81	3·89	4·02	4·12	4·19	4·29	4·41
15	2·95	3·25	3·43	3·55	3·64	3·71	3·83	3·92	3·99	4·07	4·18
20	2·85	3·13	3·29	3·40	3·48	3·55	3·65	3·73	3·80	3·87	3·97
25	2·788	3·055	3·205	3·309	3·388	3·452	3·551	3·626	3·687	3·759	3·852
30	2·75	3·01	3·15	3·25	3·33	3·39	3·49	3·56	3·62	3·69	3·78
40	2·70	2·95	3·09	3·19	3·26	3·32	3·41	3·48	3·53	3·60	3·68
60	2·66	2·90	3·03	3·12	3·19	3·25	3·33	3·40	3·45	3·51	3·59

3. Applications of the tabulations

Given below are a number of applications of the tabulations. Further details and numerical examples are given in an unpublished technical report by G. J. Hahn.

3.1. *Prediction intervals to contain all of k future means and when the estimate of σ^2 is pooled from several samples*

A simultaneous 100γ% prediction interval to contain k future observations is an interval which will contain the values of all k such observations with a specified probability γ. Hahn (1969, 1970) provided tabulations of factors for constructing one-sided and two-sided simultaneous prediction intervals given the values of a past sample of n observations from the same normal distribution. Also, Chew (1968) suggested two approximate procedures for obtaining such intervals.

The percentiles given here can be used to obtain the required factors in the preceding situation. However, they also apply in more general cases where (*a*) one desires simultaneous prediction intervals to contain the means of all of k future samples from the given normal population, where the ith sample is based on m_i observations ($i = 1, ..., k$); and (*b*) the given information consists of a single sample to estimate μ, but several samples to estimate σ^2.

In particular, let $Y_1, ..., Y_n$ be the known values of n random observations from a normal distribution with mean μ and standard deviation σ and let $\bar{Y}$ denote the mean of the given sample. Also let S^2 be an estimate of σ^2 which is independent of $Y_1, ..., Y_n$ such that $\nu S^2/\sigma^2$ follows a chi-squared distribution with ν degrees of freedom.

Let $\bar{X}_1, ..., \bar{X}_k$ be the unknown sample means of k additional samples, based on $m_1, ..., m_k$ observations from the same normal distribution, where the $\sum_{i=1}^{k} m_i$ additional observations are independent of one another and are also independent of $\bar{Y}$ and S^2. If $m_i = m$ ($i = 1, ..., k$), i.e. all future samples are of the same size, an exact two-sided simultaneous 100γ% prediction interval to contain all k future means is

$$\bar{Y} \pm u\{k, \nu, m/(m+n); \gamma\} S\{(1/m) + (1/n)\}^{\frac{1}{2}}.$$

In the general case, where $m_i \neq m$ ($i = 1, ..., k$), conservative two-sided 100γ% simultaneous prediction intervals to contain all k future means are

$$\bar{Y} \pm u\{k, \nu, \min_i m_i/(n + \min_i m_i); \gamma\} S\{(1/m_i) + (1/n)\}^{\frac{1}{2}} \quad (i = 1, ..., k).$$

The preceding result follows readily from a theorem by Sidak (1968) and is sharper, i.e., leads to shorter intervals, than some approximations previously suggested by Chew (1968). Specifically, Sidak's theorem is as follows. Let $X_1, ..., X_k$ be multivariate normal variates with zero means and variances 1 and under probability law $P_{\lambda_1, ..., \lambda_k}$ with correlation matrix $(\lambda_i \lambda_j \rho_{ij})$ for $i \neq j$ depending on the k parameters $\lambda_1, ..., \lambda_k$, where $0 \leq \lambda_i \leq 1$ ($i = 1, ..., k$). Also let S be a positive random variable which is independent of $X_1, ..., X_k$. Then

$$P(\lambda_1, ..., \lambda_k) = P_{\lambda_1, ..., \lambda_k}(X_1/S < u_1, ..., X_k/S < u_k)$$

is a nondecreasing function of each λ_i, $0 \leq \lambda_i \leq 1$ ($i = 1, ..., k$). A simpler proof of this theorem than that originally given has since been obtained by Jogdeo (1970).

3.2. *Multiple comparison between k treatment means and a control mean*

The problem of the simultaneous comparison of the means of k treatments with that of a control group has been considered by Dunnett (1955, 1964), and the latter reference provides tabulations as described in § 1. In particular, let $\bar{Y}, \bar{X}_1, \ldots, \bar{X}_k$ be independent sample means from a control group and from k treatment groups based upon $n, m_1, \ldots, m_k$ independent observations, respectively, from normal distributions with unknown population means $\mu_0, \mu_1, \ldots, \mu_k$, respectively, and a common unknown variance σ^2. Let $\nu S^2/\sigma^2$ be a chi-squared variate with ν degrees of freedom that is independent of $\bar{Y}, \bar{X}_1, \ldots, \bar{X}_k$.

Then if $m_i = m$ $(i = 1, \ldots, k)$, i.e. each treatment involves the same sample size, a set of k exact two-sided $100\gamma\,\%$ simultaneous confidence intervals to contain the true mean differences between the control group and each of the treatment groups are obtained as

$$(\bar{X}_i - \bar{Y}) \pm u\{k, \nu, m/(m+n); \gamma\} S\{(1/m) + (1/n)\}^{\frac{1}{2}} \quad (i = 1, \ldots, k).$$

In the general case, where $m_i \neq m$ $(i = 1, \ldots, k)$, it follows from Sidak's (1968) theorem that corresponding conservative two-sided $100\gamma\,\%$ simultaneous confidence intervals are obtained as

$$(\bar{X}_i - \bar{Y}) \pm u\{k, \nu, \min_i m_i/\min_i (m_i + n); \gamma\} S\{(1/m_i) + (1/n)\}^{\frac{1}{2}} \quad (i = 1, \ldots, k).$$

3.3. *Simultaneous confidence intervals to contain all of k population means*

Assume that $\bar{X}_1, \ldots, \bar{X}_k$ are independent sample means based upon $m_1, \ldots, m_k$ independent observations, from k normal populations with unknown means $\mu_1, \ldots, \mu_k$ and unknown common variance σ^2. Also let $\nu S^2/\sigma^2$ be a chi-squared variate with ν degrees of freedom that is independent of $\bar{X}_1, \ldots, \bar{X}_k$. Then a set of exact two-sided $100\gamma\,\%$ simultaneous confidence intervals to contain all of the μ_i $(i = 1, \ldots, k)$ is obtained as

$$\bar{X}_i \pm u(k, \nu, 0 \cdot 0; \gamma) S(1/m_i)^{\frac{1}{2}} \quad (i = 1, \ldots, k);$$

see Miller (1966, p. 71). If the correlations between the sample means are not all zero, the preceding expression still applies, but is conservative. This result, too, is a consequence of Sidak's (1968) theorem.

3.4. *Simultaneous confidence intervals to contain k regression coefficients*

Let $B_1, \ldots, B_k$ be the least squares estimates of the parameters $\beta_1, \ldots, \beta_k$ in the linear regression model

$$y_i = \beta_1 x_{i1} + \beta_2 x_{i2} + \ldots + \beta_k x_{ik} + e_i \quad (i = 1, \ldots, n),$$

where y_i is the observed value of the dependent variable, $x_{i1} = 1, x_{i2}, \ldots, x_{ik}$ are the known values of the $(k-1)$ independent variables and the e_i are independently normally distributed random variables with mean 0 and common variance σ^2. Also let $\mathbf{X}$ denote the design matrix of the n independent observations with typical element x_{ij} $(i = 1, \ldots, n; j = 1, \ldots, k)$ and let c^{ii} be the ith diagonal element of the matrix $(\mathbf{X}'\mathbf{X})^{-1}$. Finally, let $\nu S^2/\sigma^2$ be a chi-squared variate that has ν degrees of freedom and which is independent of the y_i.

Then two-sided $100\gamma\,\%$ simultaneous confidence intervals to contain a subset K consisting of k' of the k regression coefficients are obtained as

$$B_i \pm u(k', \nu, 0 \cdot 0; \gamma) S(c^{ii})^{\frac{1}{2}} \quad (i \in K).$$

These intervals are exact in the special case where the corresponding columns of the design matrix are orthogonal; see Miller (1966, p. 71). For other cases, the preceding simultaneous confidence intervals are conservative, again as a result of Sidak's (1968) theorem.

3·5. *Miscellaneous applications of the tabulations*

The following further applications of the tabulations will be mentioned only briefly. Further details are given in the indicated references.

1. The construction of simultaneous confidence intervals to contain any linear combinations of the population means; see Miller (1966, p. 71) and Dunn & Massey (1965).
2. The construction of a confidence band for a regression line over a finite range; see Dunn (1968).
3. The construction of confidence intervals to contain certain interactions in a two-way fixed effects analysis of variance model; see Dunn & Massey (1965).
4. The construction of simultaneous prediction intervals to contain each of k future observations based on a regression analysis.
5. The construction of simultaneous confidence intervals to contain the true regression equation at each of k conditions.

The last two items are discussed in detail in an unpublished technical report by G. J. Hahn.

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Note added in proof. Part of the unpublished tables of P. Krishnaiah and J. V. Armitage, mentioned in §1, have since appeared in a book edited by R. C. Bose *et al.* (1970), *Essays in Probability and Statistics*, University of N. Carolina Press.

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Some key words: Multivariate *t* distribution; Simultaneous prediction intervals; Simultaneous confidence intervals; Multiple comparisons.

Appendix H

Statistical Analysis

Appendix H - Statistical Analyses
Wyeth Holdings Corporation
Bound Brook, New Jersey Site
Impound 8 Facility Ground Water Program
Second Half 2009

RCRA-D1 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	7.58	2.03
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	1.041				
Critical T-value	5.61				

RCRA-D2 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	7.32	1.99
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	0.325				
Critical T-value	5.61				

RCRA-D3 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	7.32	1.99
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	0.325				
Critical T-value	5.61				

RCRA-D4 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	7.29	1.99
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	0.241				
Critical T-value	5.61				

RCRA-D7 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	6.43	1.86
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	-2.332				
Critical T-value	5.61				

RCRA-D8 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	7.26	1.98
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	0.156				
Critical T-value	5.61				

RCRA-D9 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	6.98	1.94
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	-0.650				
Critical T-value	5.61				

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RCRA-D10 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	7.36	2.00
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	0.437				
Critical T-value	5.61				

RCRA-D11 *pH Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	6.95	1.94	1.975	7.87	2.06
RCRA D-6	6.99	1.94			
RCRA D-14	7.26	1.98			
RCRA D-15	7.64	2.03			
Variance	0.0019				
T-value	1.810				
Critical T-value	5.61				

RCRA-D1 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	518	6.25
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	0.237				
Critical T-value	4.31				

RCRA-D2 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	502	6.22
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	0.194				
Critical T-value	4.31				

RCRA-D3 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	564	6.34
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	0.354				
Critical T-value	4.31				

RCRA-D4 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	439	6.08
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	0.011				
Critical T-value	4.31				

RCRA-D7 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	660	6.49
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	0.569				
Critical T-value	4.31				

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RCRA-D8 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	391	5.97
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	-0.148				
Critical T-value	4.31				

RCRA-D9 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	448	6.10
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	0.039				
Critical T-value	4.31				

RCRA-D10 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	347	5.85
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	-0.311				
Critical T-value	4.31				

RCRA-D11 *TDS Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	562	6.33	6.077	314	5.75
RCRA D-6	972	6.88			
RCRA D-14	237	5.47			
RCRA D-15	278	5.63			
Variance	0.4271				
T-value	-0.448				
Critical T-value	4.31				

RCRA-D1 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1	0.00
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	-0.738				
Critical T-value	4.31				

RCRA-D2 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1	0.00
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	-0.738				
Critical T-value	4.31				

RCRA-D3 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1	0.00
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	-0.738				
Critical T-value	4.31				

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RCRA-D4 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1	0.00
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	-0.738				
Critical T-value	4.31				

RCRA-D7 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1.6	0.47
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	0.863				
Critical T-value	4.31				

RCRA-D8 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1.2	0.18
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	-0.117				
Critical T-value	4.31				

RCRA-D9 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	3.3	1.19
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	3.329				
Critical T-value	4.31				

RCRA-D10 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1	0.00
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	-0.738				
Critical T-value	4.31				

RCRA-D11 *TOC Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.4	0.34	0.217	1	0.00
RCRA D-6	1.7	0.53			
RCRA D-14	1.0	0.00			
RCRA D-15	1.0	0.00			
Variance	0.0689				
T-value	-0.738				
Critical T-value	4.31				

RCRA-D1 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	677	6.52
RCRA D-6	1,328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	0.101				
Critical T-value	4.31				

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RCRA-D2 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	719	6.58
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	0.189				
Critical T-value	4.31				

RCRA-D3 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	770	6.65
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	0.289				
Critical T-value	4.31				

RCRA-D4 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	622	6.43
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	-0.022				
Critical T-value	4.31				

RCRA-D7 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	1086	6.99
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	0.791				
Critical T-value	4.31				

RCRA-D8 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	493	6.20
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	-0.361				
Critical T-value	4.31				

RCRA-D9 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	587	6.38
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	-0.107				
Critical T-value	4.31				

RCRA-D10 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	425	6.05
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	-0.578				
Critical T-value	4.31				

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RCRA-D11 *Specific Conductivity Analysis*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	821	6.71	6.448	420	6.04
RCRA D-6	1328	7.19			
RCRA D-14	376	5.93			
RCRA D-15	388	5.96			
Variance	0.3758				
T-value	-0.595				
Critical T-value	4.31				

RCRA-D8* *Chloroform*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.00	0.00	0.298	0.24	-1.43
RCRA D-6	1.00	0.00			
RCRA D-14	1.00	0.00			
RCRA D-15	3.3	1.19			
Variance	0.3564				
T-value	-2.585				
Critical T-value	4.31				

RCRA-D8 *Tetrachloroethene*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.00	0.00	0.822	0.55	-0.60
RCRA D-6	1.00	0.00			
RCRA D-14	1.00	0.00			
RCRA D-15	26.8	3.29			
Variance	2.7034				
T-value	-0.772				
Critical T-value	4.31				

RCRA-D10 *Tetrachloroethene*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.00	0.00	0.822	0.36	-1.02
RCRA D-6	1.00	0.00			
RCRA D-14	1.00	0.00			
RCRA D-15	26.8	3.29			
Variance	2.7034				
T-value	-1.003				
Critical T-value	4.31				

RCRA-D8 *Trichloroethene*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.00	0.00	0.504	0.3	-1.20
RCRA D-6	1.00	0.00			
RCRA D-14	1.00	0.00			
RCRA D-15	7.5	2.01			
Variance	1.0150				
T-value	-1.516				
Critical T-value	4.31				

RCRA-D11 *Trichloroethene*

Upgradient Well	Upgradient Conc.	Upgradient Nat. Log	Upgradient Avg.	Downgradient Conc.	Downgradient Nat. Log
RCRA D-5	1.00	0.00	0.504	0.47	-0.76
RCRA D-6	1.00	0.00			
RCRA D-14	1.00	0.00			
RCRA D-15	7.5	2.01			
Variance	1.0150				
T-value	-1.118				
Critical T-value	4.31				

* Chloroform detected only in the duplicate sample RCRA-D8 DUP